



November 2013

Rhodophyllus Notebook 1

L. R. Hesler

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LEPTONIA ABNORMIS Pk.

Jour. Myc. 14:2. 1908

Leptoniella abnormis (Pk.) Murr., North Amer. Flora 10:91. 1917.

Pileus 2-2.5 cm broad, convex, broadly umbilicate, hygrophanous, dark grayish brown when dry, blackish brown when wet, glabrous, obscurely striatulate when moist. Context concolorous, thin.

Lamellae adnexed, slightly rounded behind, pinkish or pale flesh-colored when mature, broad, subdistant.

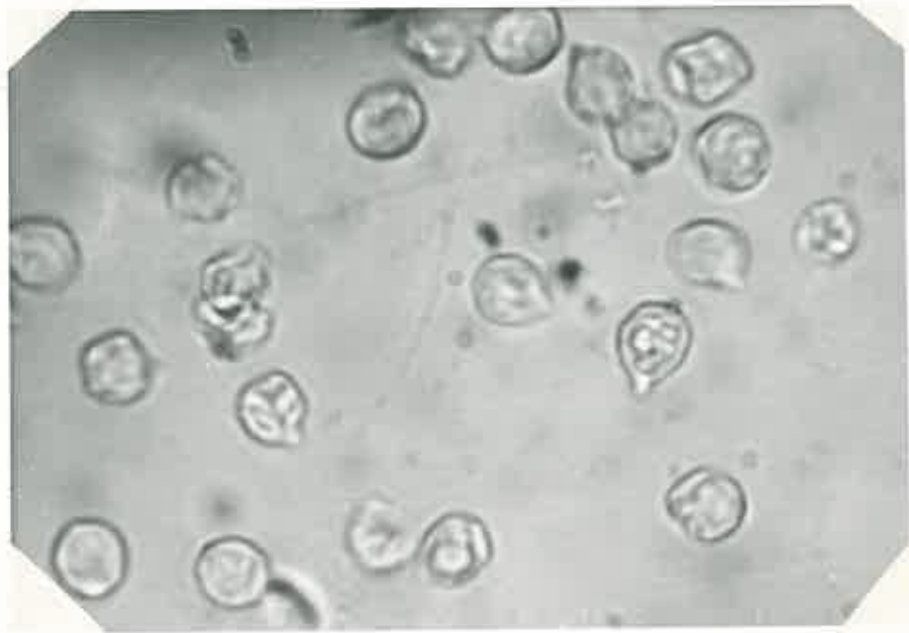
Stipe 2.5 cm x 2 mm, whitish, equal, glabrous, hollow.

Spores 6-7 x 5-5.5 μ , usually obscurely 5-6-sided, at times distinctly 6-sided. Basidia 19-28 x 5.5-7(8) μ , 2-4-spored. Pleurocystidia and cheilocystidia none. Gill trama subparallel, hyphae 6-10 μ broad. Pileus trama radial (appearing cellular in tangential sections). Cuticle repent, with numerous colorless surface hyphae, some of which are more or less erect. Clamp connections on cuticular hyphae rare. Lactifers none.

Habit, Habitat, and Distribution - On damp soil, at the edge of deciduous woods, Massachusetts, November.

Material Studied - MASSACHUSETTS: Peck, the type, collected at Ellis, Nov., 1907.

Observations - This is perhaps somewhat related to Entoloma pallidum Murr. (L. pallida [Murr.] comb. nov.), in which the pileus is colored and the stipe white, but L. pallida has larger spores, 9-11 x 7.5-8.5 μ . It is not yet reported from the Southeast, but might be expected to occur here.



Leptonia abnormis PK. - Type

X 2000

x

CLITOPILUS ABORTIVUS (B. & C.) Sacc.

Syll. Fung. 5:701. 1887

Pileus 5-10 (17) cm. broad, expanded, plane or undulate, gray-brown, "drab" to "light drab," silky or tomentose to radiately fibrillose, more or less subzonate, not hygrophanous, not viscid, margin even. Flesh white, thin, fragile; odor and taste farinaceous. Lamellae decurrent, at times adnate, medium broad, narrowed in front, close, grayish white then "buff pink" to "avellaneous," edges even, undulating. Stipe 2.5-7 (12) cm. x 6-12 (16) mm., equal or sub-bulbous, concolor or paler, fibrillose-striate, base white mycelioid, solid.

Spores 8-11 x 5-6 μ , angular, 5- 6-sided, angles sharp, apiculate, color in mass: "cinnamon." Pleurocystidia and cheilocystidia none. Gill trama undulating parallel.

Habitat and Distribution. - On soil, in troops or scattered, in deciduous woods, Tennessee, North Carolina, Alabama, and Florida, August-October.

Discussion. - ~~At times the sporophores fail to develop because of a fungous disease, and are aborted.~~



19466 - *Clitopilus abortivus* B. + C.

CLITOPILUS ABORTIVUS

Type of Clavaria gigantea Schw. (Acurtis Fr.)

The type of Clavaria gigantea Schw. was borrowed from the Farlow Herbarium by Dr. Ron Petersen, and lent to me for study, December 8, 1966.

The packet label reads:

34. Clavaria gigantea Schw., Salem, Herb. Schw., Type. (Also says: see Burt's slide.)

The packet contains a small sheet of paper on which are mounted the two halves of a carpophoroid. My observations:

Crushed mounts and sections: mounted in 2% KOH and in Melzer's reagent. In all mounts the structures were colorless in KOH and yellowish in Melzer's. Mostly, the mounts showed an amorphous material, butt also with scattering fragments of hyphae. The hyphae were branched, septate, often more or less nodulose. Clamp connections, basidia, and basidiospores were not found in any of the mounts.

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23492 RHODOPHYLLUS ABORTIVUS (B & C) Singer

Pileus 2-4 cm., convex, more or less broadly umbonate, many carpophores aborted, "pallid mouse gray," densely fibrillose, dry, margin even. Context pallid, thick; odor and taste farinaceous.

Lamellae decurrent, at first whitish then grayish with a pinkish tint, close, narrow to medium broad, thin, edges concolorous, rough.

Stipe 3-6 mm. x 6-8 mm., dingy grayish, appressed silky-fibrillose, equal, base curved and strigose-mycelioid, solid.

Spores 7-9 x 5-6 μ , 5-sided, at times obscurely 6-sided, symmetrical, color in deposit: "wood brown." Basidia 33-38 (43) x 7-9 μ , 2-4-spored. Pleurocystidia and cheilocystidia none. Gill trama subparallel, hyphae 3-5 μ broad. Pileus trama radial (appearing as pseudoparenchyma in tangential sections). Cuticle repent the surface densely covered with a tangle of pale fuscous to colorless, septate hyphae. Clamp connections none. Lactifers none.

The carpophores and spores are smaller than usual; otherwise it agrees with abortivus.

24977

CLITOPILUS ABORTIVUS B. & C.

near Monterrey Lake

Coll: A. J. Sharp, Oct. 13th 1962

Pileus more or less caespitose, 4-8 cm. broad, grayish to "pale olive buff," not viscid, glabrous, even. Context white, thick, firm; odor nauseous, taste nauseous then bitter.

Lamellae decurrent, gray, then "pinkish cinnamon," close, marrow to medium broad.

Stipe 3-6 cm. x 10-18 mm., dingy greyish, apex pruinose, elsewhere sparsely fibrillose, bases connate, solid.

Spores 7.5-9 x 4.5-5.5 μ , 5-6-sided; in deposit: "orange cinnamon."

LEPTONIA ACERICOLA (Murr.) Murr.

Mycologia 9:180. 1917.

Leptoniella acericola Murr., North Amer. Flora 10:88. 1917.

Pileus reaching 5 cm in diameter, convex to plane, slightly umbilicate with age, not umbonate, rosy-isabelline with a lilac tint, finely marked with darker fascicles of hairs, older pilei more isabelline with a fuliginous disk, dry, margin concolorous, incurved, even. Context taste slightly farinaceous.

Lamellae adnate, pure white to dull-rosey-isabelline, ventricose, subdistant, edges entire and concolorous.

Stipe 3-4 cm long, 3-4 mm thick, bright-steel-blue, fading to subumbrinous in age, dry, densely squamulose, equal.

Spores 8.5-11 x 6-7.5 μ , 6-9-sided, angles and sides often indistinct. Basidia 28-38 x 8-10 μ , 2-4-spored. Pleurocystidia and cheilocystidia none. Subhymenium not clearly differentiated. Gill-trama subparallel. Pileus trama radial. Cuticle of brown repent hyphae, which often, in clusters, are more or less erect to form scales, or "fascicles" (Murrill). Clamp connections and lactifers not found.

Habit, Habitat, and Distribution - On sugar maple log, New York, July.

Material Studied - NEW YORK: Murrill 210, the type, from Lake Placid, Adirondack Mountains, New York, July 17-29, 1912; also from Chappaqua, New York, Aug.-Sept., 1909.

Observations - ~~T~~he description of macroscopic characters above are from Murrill, and the microscopic characters are based on a study of the type. The spores are distinctive in their many sides and angles which are more or less indistinct. Murrill says they are rose-colored.



Leptonia acericola (Murr.) Murr.

X 2000

LEPTONIA AERUGINOSA Pk.

Bull. Torrey Bot. Club 26:65. 1899

Leptoniella aeruginosa (Pk.) Murr., North Amer. Flora 10:89. 1917.

Pileus 1.5-2.5 cm broad, convex, umbilicate or centrally depressed, aeruginous, fading to an ashy-green hue, margin striate. Context thin.

Lamellae adnate, aeruginous, then tinged flesh-color, broad, subdistant.

Stipe 2.5 cm x 2 mm, concolorous, glabrous, hollow.

Spores 10-13 x 7-9 μ , 6-7-sided. Basidia 30-38 x 7-10 μ , 2-4-spored. Pleurocystidia and cheilocystidia none. Gill trama subparallel, hyphae 7-10 μ broad. Pileus trama radial (appearing cellular in tangential sections). Cuticle repent, numerous surface colorless hyphae more or less uplifted, the terminal elements pilocystidia. Clamp connections none. Lactifers abundant in the pileus trama.

Habit, Habitat, and Distribution - In shaded places in woods, Canada, August.

Material Studied - CANADA: Peck, the type, collected by John Dearness, at Oxbow, August, 1897.

Observations - The description of the microscopic characters is based on a study of the type. The uniformly aeruginous color of the pileus, gills, and stipe is distinctive. The stipe in both L. housei and L. multicolor is green, but here the similarity to L. aeruginosa, if any, ceases.

NOLANEA ADIRONDACKENSE (Murr.) *comb. nov.*

* Entoloma adirondackense Murr., N. A. Flora 10:116. 1917.

Pileus 2-3 cm. broad, convex then more or less plane, more or less umbonate, moist, glabrous, pale dull avellaneous throughout, margin even. Context rather thin.

Lamellae adnexed, soon rose-colored, several times inserted, close or nearly subdistant, rather broad, ventricose, edges even.

Stipe 4 cm. x 2-3 mm., melleous, translucent, glabrous, base whitish-mycelioid, equal.

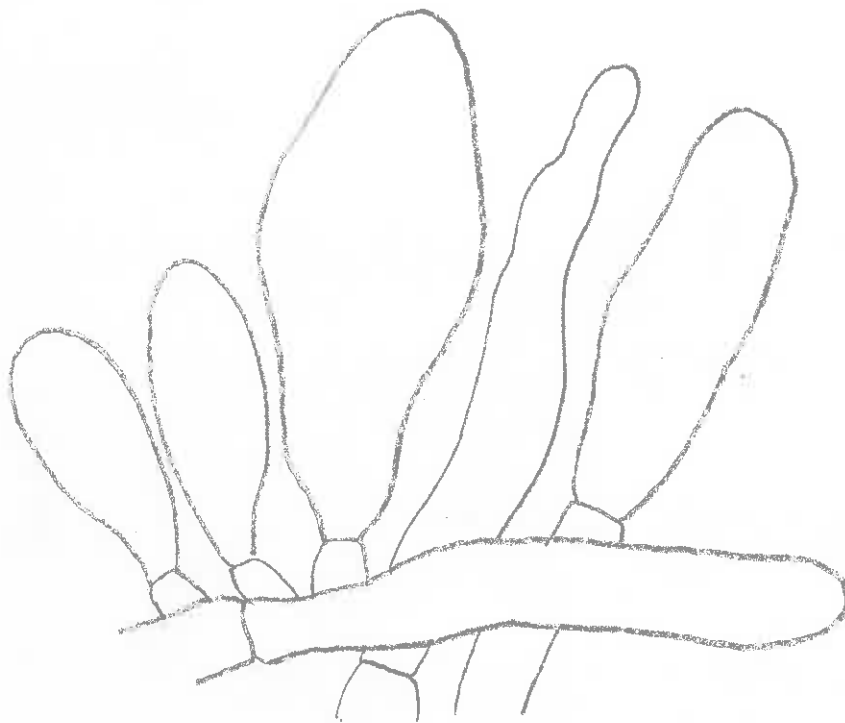
Spores 11-13 (-14-15) x 7-8 (9) μ , ellipsoid, 6-7(8)-sided, at times obscurely 8-9-sided and somewhat tuberculate, rose-colored. Basidia 31-36 x 7-9 μ , 2-spored. Pleurocystidia and cheilocystidia none. Gill trama subparallel, hyphae 5-8 μ broad. Pileus trama radial. Cuticle repent, with rather numerous colorless more or less uplifted hyphae, at times forming a slight trichodermium. Lactifers present in the pileus trama. Clamp connections none.

Habit, habitat, and distribution. - On a stump, in balsam woods, New York, October.

Material studied. - NEW YORK: Murrill 1107, type, from Lake Placid, Adirondack Mts., Oct. 3-14, 1912.

Observations. - The description of the microscopic characters above is based on a study of the type.

Leptonia aeruginosa PK.
Type



(1)

Pilocystidia ~ $\times 1000$

Orton follows Bresadola's
concept, not K + R.

LEPTONIA AETHIOPS (Fr.) ^{Gillet} ~~K + R~~.

~~Bidr. Finl. Nat. Folk 32.274. 1879~~

Agaricus aethiops Fr., Epicr. Myc., p. 152, 1838.

Pileus 1.5-4 cm broad, convex, disc depressed, shining,
glabrous but showing (under a lens) fibrils which ^{are} rarely aggre-
gated into scales, ^{surface} at first blackish, inclined toward blue or
violet, ^{at times} ~~but may become~~ fuliginous-brown or dusky-brown, at
first non-striate, ^{in age becoming} ~~at last~~ clearly striatulate.

Lamellae adnate, at first white, then ~~yellowish~~ flesh,
broad, close or moderately so, slightly ventricose, edges con-
colorous.

Stipe 2.5 - 5 cm x 1.7 - 3.2 mm, blackish-fuscos,
(slightly paler than the pileus), ^{not becoming paler in age,} glabrous, blackish-punctate
upward, equal, hollow.

Spores (8.5) 9-13 x 6-8 μ , 5-⁶⁽⁷⁾⁻~~8~~-sided, at times indistinctly
so. Basidia 33-43 x 7-10 μ , 4-spored. Pleurocystidia none;
cheilocystidia 37-54 x 4-7 μ , cylindric or clavate, often repent
against the gill edge. Gill trama subparallel, hyphae 4-10 μ
broad. Pileus trama pseudo-cellular in tangential sections,
radially disposed as seen in radial sections. Cuticle of
brown, repent or somewhat erect, cylindric or clavate pilocystidia,

5-15 μ broad, at times in small tufts apparently forming more or less repent or ~~semi~~-erect scales. Clamp connections none.

Observations - Kühner & Romagnesi (1953), in their key, place L. aethiops in group LEPTONIA GENUINAE, ~~lacking~~ clamp connections ^{none,} lamellae rarely decurrent ⁿ, taste never ~~mealy~~ ^{farinaceous.}, at least some parts black or blue, the pileus may be tinted violet, blue, or blackish at least at first, lamellae never bluish nor violet in youth, pileus non-striate or only slightly striate, cheilocystidia usually so numerous that the gill edges seem to be entirely sterile, cap typically glabrous but under a lens showing fibrils. Kühner & Romagnesi (1953) cite Bresadola Tab. 579, L. nephrens Fr. as representing L. aethiops. ^{Their concept of} ~~The~~ above features represent L. aethiops sensu Kühner; Romagnesi apparently was not wholly in agreement with Kühner in his concept, ~~of aethiops~~.

In their key, Kühner & Romagnesi distinguish from aethiops another species, described as R. corvinus Kühner sp. nov. This latter has a tomentose-fibrillose, blackish or blue-violet cap and remaining so, the stipe much lighter (steel-gray or blue-gray), becoming much paler in age until almost whitish, almost grainy-flaky, especially above, granulate, the granules so abundant as to render a mount milky;

spores 8.5-12.2 x 6.5-7.2 μ . This is ~~corvinus~~ Kühner ~~sp.~~
~~nov.~~ ^{his corvinus} which he thinks is doubtfully represented by Lange's
^
Plate 76 C, as R. lampropus.

If the Haglung-Rydberg collection from Stockholm is
L. aethiops as labelled, it ~~was~~ ^{then} is quite possible that all my
^
collections labelled L. corvina var. corvina are really L.
aethiops.

LEPTONIA AETHIOPS (Fr.) ^{gill.} ~~Rehm.~~

Bidr. Finl. Nat. Folk 32:274. 1879.

Agaricus aethiops Fr., Epicr. Myc., p. 152, 1838.

Pileus 1.5-4 cm broad, convex, disc depressed, shining, glabrous but showing (under a lens) fibrils which rarely aggregated into scales, at first blackish, inclined toward blue or violet, but may become fuliginous-brown or dusky-brown, at first non-striate, at last clearly striatulate.

Lamellae adnate, at first white, then yellowish-flesh, broad, close or moderately so, slightly ventricose, edges concolorous.

Stipe 2.5 - 5 cm x 1.7 - 3.2 mm, blackish-fuscous, (slightly paler than the pileus), glabrous, blackish-punctate upward, equal, hollow.

Spores (8.5) 9-13 x 6-8 μ , 5-7-sided, at times indistinctly so. Basidia 33-43 x 7-10 μ , 4-spored. Pleurocystidia none; cheilocystidia 37-54 x 4-7 μ , cylindric or clavate, often repent against the gill edge. Gill trama subparallel, hyphae 4-10 μ broad. Pileus trama pseudo-cellular in tangential sections, radially disposed as seen in radial sections. Cuticle of brown, repent or somewhat erect, cylindric or clavate pilocystidia,

5-15 μ broad, at times in small tufts apparently forming more or less repent or semi-erect scales. Clamp connections none.

Observations - Kuhner & Romagnesi (1953), in their key, place L. aethiops in group LEPTONIA GENUINAE, lacking clamp connections, lamellae rarely decurrent, taste never mealy, at least some parts black or blue, the pileus may be tinted violet, blue, or blackish at least at first, lamellae never bluish nor violet in youth, pileus non-striate or only slightly striate, cheilocystidia usually so numerous that the gill edges seem to be entirely sterile, cap typically glabrous but under a lens showing fibrils. Kuhner & Romagnesi (1953) cite Bresadola Tab. 579, L. nephrens Fr. as representing L. aethiops. The above features represent L. aethiops sensu Kuhner; Romagnesi apparently was not wholly in agreement with Kuhner in his concept of aethiops.

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spores 8.5-12.2 x 6.5-7.2 μ . This is corvinus Kuhner, sp. nov., which he thinks is doubtfully represented by Lange's Plate 76 C, as R. lampropus.

If the Haglung-Rydberg collection from Stockholm is L. aethiops as labelled, it then is quite possible that all my collections labelled L. corvina var. corvina are really L. aethiops.

LEPTONIA AETHIOPS

Collection borrowed from Mus. Botan. Stockholm; from Upland, by G. Haglund & R. Rydberg, Sept. 20, 1953. Studied April 14, 1964.

Spores (8.5) 9-13 x 6-8 μ , 5-7-sided, at times indistinctly so. Basidia 33-43 x 7-10 μ , 4-spored. Pleurocystidia none; cheilocystidia 37-54 x 4-7 μ , cylindric or clavate, often repent against the gill edge. Gill trama subparallel, hyphae 4-10 μ broad. Pileus trama pseudo-cellular in tangential sections, radially disposed as seen in radial sections. Cuticle of brown, repent or somewhat erect, cylindric or clavate pilocystidia, 5-15 μ broad, at times in small tufts apparently forming more or less repent or semi-erect scales. Clamp connections none.

Same as van Post's collection.

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Collection borrowed from Mus. Botan. Stockholm; from Upland, by G. Haglund & R. Rydberg, Sept. 20, 1953. Studied April 14, 1964.

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Same as van Post's collection.

Leptonia aethiops Gr. var. aethiops
from Stockholm, coll. by Haglund & Rydberg,
Sept 20 - '53.



ch. $\times 1000$

LEPTONIA AETHIOPS Fr.

Collection from Mus. Botan. Stockholm, borrowed and studied April 14, 1964, taken at Uppland, Uppsala, Aug. 11, 1903 by H. von Post.

Spores 10-12 x 7-8 μ , 5-7-sided, at times obscurely so, Basidia 32-38 x 7-9 μ , 4-spored. Pleurocystidia none; cheilocystidia 38-56 x 5-7 μ , cylindric or sub-ventricose, appressed against the gill edge. Gill trama subparallel, hyphae 4-9 μ broad. Pileus trama radial. Cuticle of brown repent hyphae, bearing some tufts of brown, clavate pilocystidia, 6-18 μ broad. Clamp connections none.

Seems the same as the Hagland & Rydberg collection.

Leptonia aethiops (Fr.) Gill.

from Stockholm, coll. by H. von Post, Aug 11 - '03



Ch. x 1000

LEPTONIA AETHIOPS

Collection from Kew; coll. by Dennis & Ellis & called also L. nefrens sensu Bres., from Bombau Cross Common, Thetford,* Aug. 8, 1954.

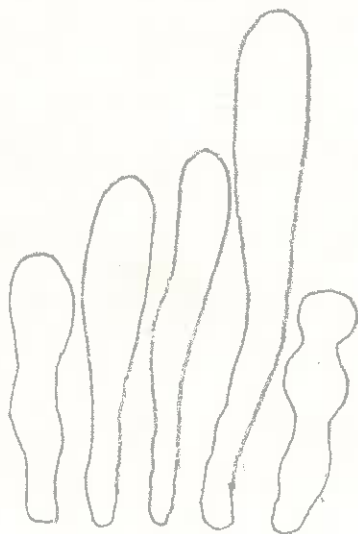
Pileus and stipe blackish-brown or black. Gill edges concolorous.

Spores 9-12 x 6-7.5 (8) μ , 5-7-sided. Pleurocystidia none; cheilocystidia 33-68 x 6-9 μ , clavate, at times slightly constricted. Gill trama subparallel or parallel, hyphae 5-12 μ broad. Pileus trama radially-disposed. Cuticle of repent hyphae bearing pale brownish, clavate, pilocystidia. Clamp connections none.

*Some 80 miles north of London

Leptonia aethiops

from Kew, Dennis + Ellis, 8/8/54
Bambam Cross Common



ch - x 1000

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Collection from Mus. Botan. Stockholm, borrowed and studied April 14, 1964, taken at Uppland, Uppsala, Aug. 11, 1903 by H. von Post.

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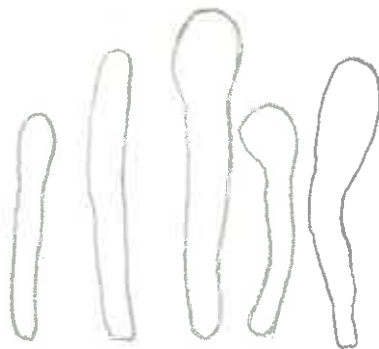
Pileus 1-3.5 cm, umbilicate, not hygrophanous, bluish-black, becoming "drab," sprinkled with fine micaceous particles, disc squamulose, margin even. Context dark bluish, fading to grayish; odor slight, pleasant, taste pleasant.

Lamellae adnate, seceding, medium broad, subdistant, white then flesh pink, edges concolorous, fimbriate.

Stipe 3-6 cm x 1.5-2.5 mm, at times subpruinose at apex, sprinkled with fine micaceous particles, equal, bluish-black becoming fuscous, base white-mycelioid, hollow.

Spores 9-12 x 6-7.5 μ , (5)6-7-sided. Basidia 27-36 x 8-10 μ , 4-spored. Pleurocystidia none; cheilocystidia cylindric, at times nodulose, 30-46 x 4-8 μ , rare (found only in a few sections). Gill trama subparallel. Pileus trama radial (as pseudoparenchyma in tangential section). Cuticle of repent hyphae, with tufts of free ends (scales) over the disc, as clavate, fuscous pilocystidia. Clamp connections none. Lactifers numerous in the trama of both the pileus and gills.

Leptonia ~~*laevis*~~ ^{*aethiops*} (Fr.) Gill.
No. 4293



Ch - x 1000

10769

LEPTONIA AETHIOPS (Fr.) Gill var. AETHIOPS

Pileus 7-12 mm, membranous, steel-blue to "Urania blue," campanulate then slightly depressed, fibrillose, the fibrils forming black scales on central portion, shining (dry), not hygrophanous, margin even at first then striate to the disk. Context thin, concolorous.

Lamellae narrowly adnexed or uncinata, white, then pale flesh, finally "pinkish cinnamon," broad, ventricose, subdistant, edges even, concolorous.

Stipe 4-5 cm x 1-1.5 mm, bluish-black, glabrous, hollow, base white-mycelioid.

Spores 9-14 x 7-9 μ , 6-8-sided. Basidia 27-33 x 8-10 μ , 4-spored. Pleurocystidia none; cheilocystidia 26-32 x 8-10 μ , clavate, not abundant, and not well developed. Gill trama subparallel, hyphae 5-11 μ broad. Pileus trama radial. Cuticle of repent hyphae, the ends as more or less erect, fuscous pilocystidia. Clamp connections none.

This has not faded as much as sometimes happens in this species.

Pileus 1-2 cm broad, depressed, blue-black, disk fibrillose-subscaly, margin striatulate. Context thin, bluish, fading.

Lamellae adnate-decurrent, white at first, then pinkish, broad, subdistant, edges concolorous.

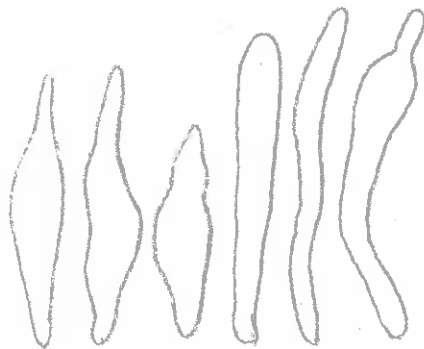
Stipe 3-6 cm x 2-3 mm, steel blue, not paling, apex squamulose, elsewhere glabrous, equal.

Spores 10-13 x 7-8.5 μ , 5-6-sided or indistinctly so, symmetrical. Pleurocystidia none; cheilocystidia 30-45 x 3-8 μ , variable: cylindric, clavate, fusoid, erratic in occurrence (absent or many sections). Basidia 26-35 x 7-10 μ , 1-2-spored (2-spored predominant). Gill trama subparallel. Pileus trama radial (as pseudoparenchyma in tangential sections). Cuticle repent, with clusters of fuscous, clavate pilocystidia, 48-72 x 8-25 μ . Clamp connections and lactifers none.

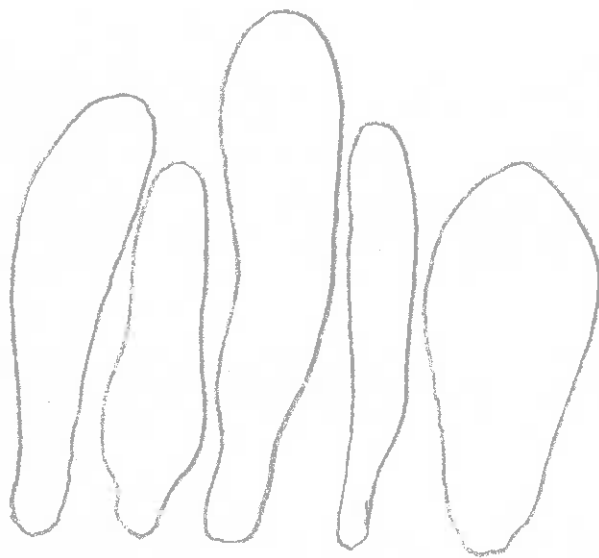
This lacks the milky mounts and paling stipe of L. corvina.

Leptonia ^{aethiops} ~~*corvina* (Kühner)~~

No. 11434



Ch - x 1000



Pilocystidia - x 1000

12764

LEPTONIA AETHIOBS (Fr.) Gill.

Pileus convex, depressed, disk fibrillose-scaly, when young bluish-black, fading to grayish brown, margin even. Context pale bluish, then fading; odor and taste mild.

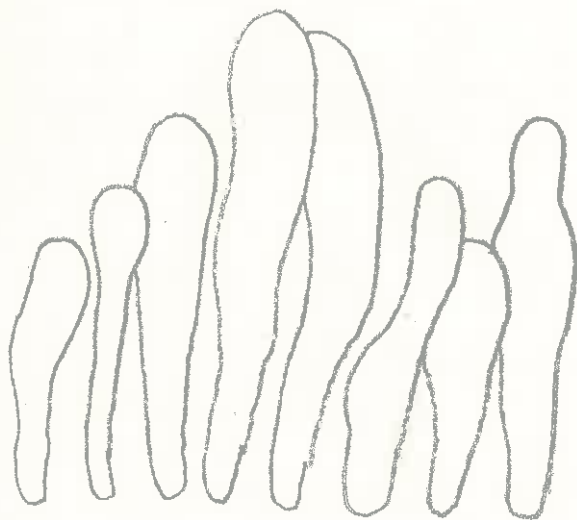
Lamellae adnexed, white at first then pinkish cinnamon, broad, subdistant, edges concolorous, fimbriate.

Stipe 2.5-4 cm x 1-3 mm, bluish-black, becoming dingy grayish, apex pruinose, elsewhere glabrous, base white-mycelioid, hollow.

Spores 10-13 (14) x 6-8 μ , 5-6-sided, at times nodulose. Basidia 33-38 x 10-11 μ , 2(4)-spored. Pleurocystidia none; cheilocystidia 50-81 x 7-12 (20) μ , cylindric to clavate, at times numerous (absent in some sections). Gill trama subparallel, hyphae 4-9 μ broad. Cuticle repent, with tufts of fuscous pilocystidia scattered over the surface, more numerous on the disc. Clamps none.

No milky mounts in KOH.

Leptonia ^{aethiops} No. 12764



Ch - x 1000

12785

LEPTONIA AETHIOPS (Fr.) Gill.

Pileus 8-12 mm, broad, depressed, blue-black, disk squamulose, margin even. Context medium thin, pallid; odor and taste mild.

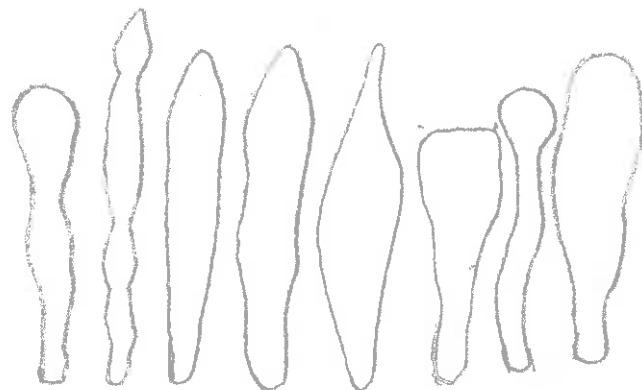
Lamellae adnate then adnexed, white becoming flesh tinted, medium broad, nearly subdistant, edges concolorous, fimbriate.

Stipe 4-5 cm x 1-2 mm, dingy below, steel-bluish upward, finally dingy gray-brown, apex squamulose, elsewhere glabrous.

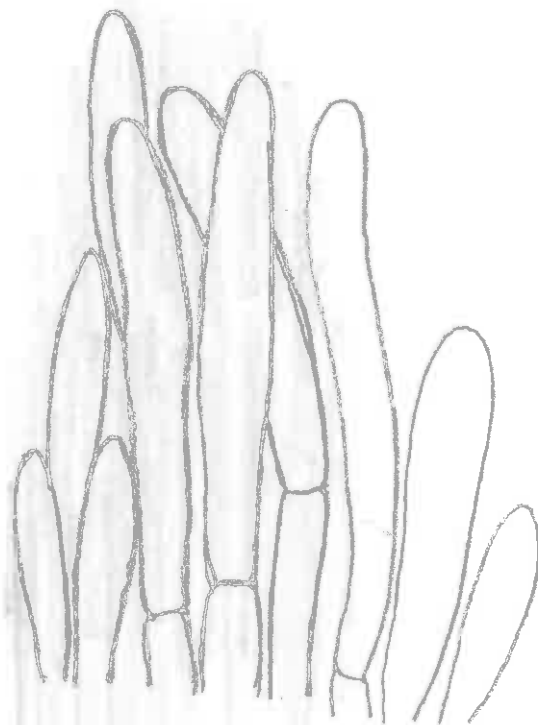
Spores 9-12 x 6-7 (8) μ , 5-6-sided, at times irregularly 6-sided. Basidia 27-35 x 7-8 μ , 2-4-spored. Pleurocystidia none; cheilocystidia cylindric, at times nodulose, again subcapitate, 40-61 x 4-14 μ , or clavate to ventricose, apex blunt or appendiculate. Subhymenium indistinct. Gill-trama subparallel, hyphae 5-8 μ broad. Cuticle repent, with scattered to numerous tufts of clavate, pale fuscous or nearly colorless pilocystidia (scales). Clamps none. Mounts not milky.

Context apparently had faded.

Leptomia aethiops 12785 var. *aethiops*



Ch - $\times 1000$



Cuticle (scale) - $\times 1000$

12816

LEPTONIA AETHIOPS (Fr.) Gill.

Pileus 8-20 mm broad, bluish-black, in age brownish, disc scaly, depressed, margin even; context whitish.

Lamellae white then flesh, edges concolorous.

Stipe steel-bluish upward, dingy below, in age becoming gray-brown.

Spores 10-13 x 6-7 μ , 5-6-sided. Basidia 30-35 x 9-11 μ , 2-4-spored. Pleurocystidia none; cheilocystidia 37-51 x 10-15 μ . Gill trama subparallel, hyphae 4-7 μ broad. Pileus trama radial. Cuticle of repent hyphae, with numerous repent to slightly uplifted, brown or fuscous, clavate pilocystidia. Clamps none. Mounts not milky.

17049

LEPTONIA AETHIOPS (Fr.) Gill.

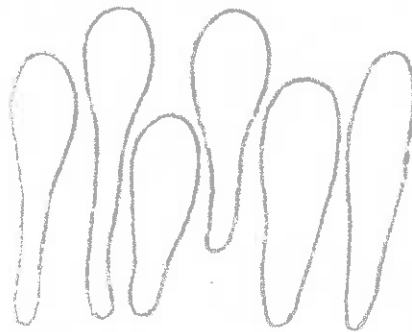
Pileus 6-10 mm broad; convex, umbilicate, "dark neutral gray," (blackish) shining when dry, with numerous dark scales, not viscid, not hygrophanous, margin even. Context thin, "pale olive-gray;" odor slightly unpleasant, taste mild.

Lamellae broadly decurrent, at first "pale olive-gray," finally pinkish, broad behind, narrowed in front, medium close, edges roughened and concolorous.

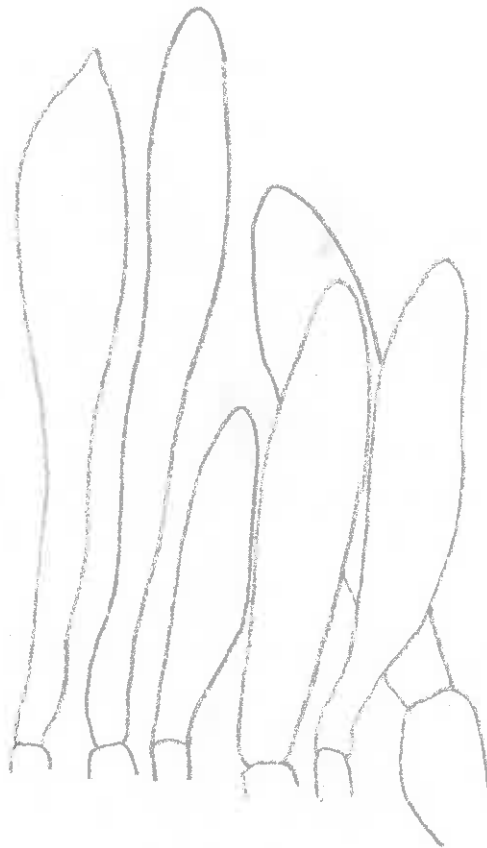
Stipe 15-20 mm x 1 mm, "dark neutral gray," glabrous, equal, shining, solid, "pale olive-gray" within.

Spores 8.5-12 x 5.5-7 μ , mostly 6-sided, some 5-7-sided, at times indistinctly so. Basidia 30-35 x 7-9 μ , 1-2-spored. Pleurocystidia none; cheilocystidia 27-42 x 8-10 μ , clavate, more rarely subpyriform, clustered. Subhymenium obscure. Gill trama subparallel. Pileus trama radial (as pseudoparenchyma in tangential sections). Cuticle repent, with dense, scattered, or tufted, fuscous pilocystidia. Clamp connections none. Lactifers present in the pileus trama. Mounts very milky from granulations in the hyphae of the gill trama.

Septonia No. 17049
atthiops



Ch - X 1000



Cuticle - X 1000

fuscos
pilocyptidia

17956

LEPTONIA AETHIOPS (Fr.) Gill.

Pileus 10-18 mm broad, umbilicate-depressed, blue-black, fading in age to brownish, disk subscaly, margin even, substriate in age. Context thin, pale blue; odor and taste mild.

Lamellae adnate-decurrent, pallid then pink, close to subdistant, broad, edges fimbriate, concolorous.

Stipe 4-5 cm x 1-3 mm, steel-grayish-blue, glabrous.

Spores 9-12 x 6-8 μ , 5-6-sided, or indistinctly so. Basidia 27-30 x 6-8 μ , 4-spored. Pleurocystidia none; cheilocystidia few, ventricose, to irregular, 37-45 x 6-8 (10) μ . Subhymenium not well differentiated. Gill trama subparallel. Cuticle repent, with fuscous, clavate pilocystidia in tufts, 37-51 x 12-15 μ .

Leptonia 17956



ch - x 1000



Cuticle - x 1000

17969

LEPTONIA AETHIOPS (Fr.) Gill.

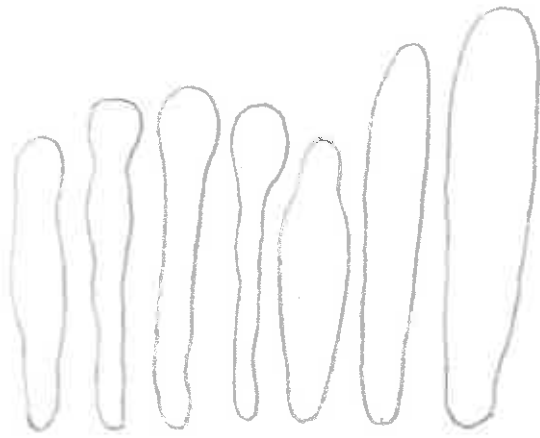
Pileus 1-3.5 cm broad, convex, disk depressed (subumbilicate), dark "Varley's gray," or darker (and not matched), not hygrophanous, squamulose, at times micaceous, margin even. Context concolorous, fading, thin; odor and taste mild or pleasant.

Lamellae emarginate-uncinate, ventricose, broad, white, then "light pinkish cinnamon" to "avellaneous," edges fimbriate, concolorous.

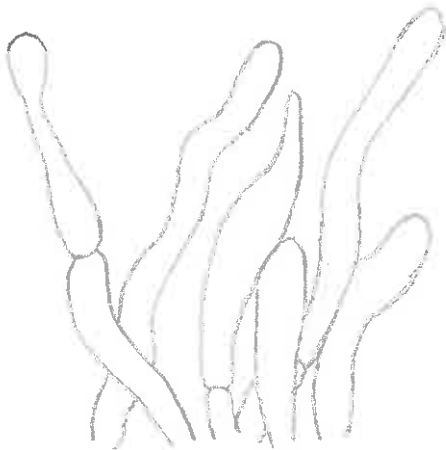
Stipe 3-7 cm x 1.5-3 mm, dry, squamulose-fibrillose, at times micaceous, apex pruinose, concolor to pileus, hollow, base white mycelioid.

Spores 9.5-13 x 6-7.5 μ , 5-6-sided, faces often concave, at times sub-nodulose, Basidia 25-28 x 8-10 μ , 2-4-spored. Pleurocystidia none; cheilocystidia 32-60 x 7-12 μ , few or clustered, cylindric to clavate, at times subcapitate, absent in some sections. Gill trama subparallel, hyphae 4-7 μ broad. Pileus trama radial. Cuticle of pileus repent, with clusters (squamulae) of fuscous to pale yellowish-brown, clavate to cylindric pileocystidia. Cuticle of stipe of repent hyphae which bear scattered or clustered caulocystidia which are pale fuscous or almost to quite colorless, cylindric to clavate or fusoid, at times somewhat constricted. Clamp connections and lactifers none. Mounts in KOH not milky.

Septonia ^{aethiops} ~~*lamproa*~~ (Fr.) Quél.
No. 17969



Ch - x 1000



Caulocystidia - x 1000



Pilocystidia

19371

LEPTONIA AETHIOPS(Fr.) Gill.

(Coll. by H. R. Milliken, Mt. Lake, Va., July 25, 1958)

Pileus convex, depressed, black, scaly on disc, even.

Lamellae adnexed, white then pinkish, edges concolorous, close.

Stipe 5.7 x 2 mm (4 mm at base), blackish, not paling, slightly scaly, hollow.

Spores 9-13 x 6-7 μ , 5-6-(-7)-sided. Pleurocystidia none; cheilocystidia 40-76 x 5-8 μ , clavate-cylindric, fuscous to almost colorless. Pilocystidia 75-105 x 10-14 μ , clavate, brownish. Clamps none. Mounts not milky.

21887

LEPTONIA AETHIOPS (Fr.) Gill. *var. aethiops*

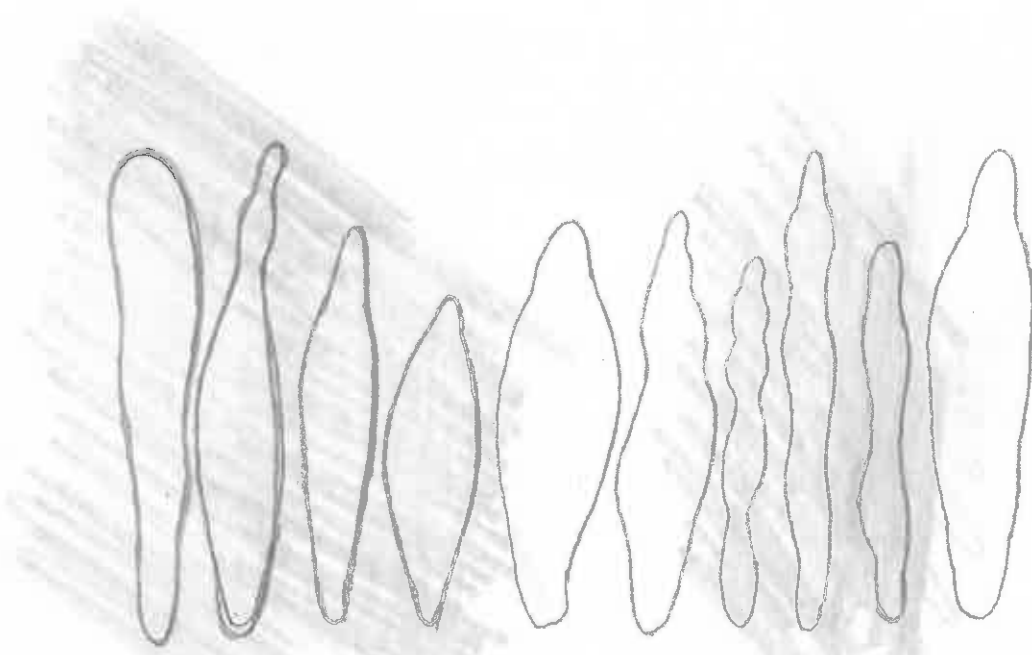
Pileus 1.5-2.5 cm broad, convex-hemispheric, finally convex, umbilicate, at first bluish-black, then fading, becoming grayish-black, disc scaly, appressed-rimose, often splitting, margin even. Context pallid-bluish, then fading to pallid, thin; odor and taste mild.

Lamellae adnexed, seceding, at first white, finally "pale cinnamon pink," broad-ventricose behind, narrowed in front, moderately close to subdistant, many short, edges even, concolorous.

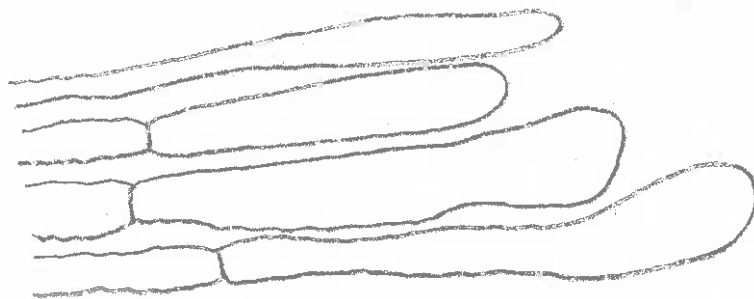
Stipe 4-8 cm x 1.5-2 mm, "blackish mouse gray" to "mouse gray," glabrous, apex pruinose, base white-mycelioid, base curved, often twisted, hollow, easily splitting, dry.

Spores 9-13 x 6-8 μ , apiculate, 5-7-sided, at times indistinctly so. Basidia 30-38 x 8-11 μ , 2-4-spored. Pleurocystidia none; cheilocystidia 42-65 x 7-15 μ , variable: clavate, fusoid, cylindric, at times constricted (best observed on younger gills; on older gills they are collapsed against the edge and difficult to distinguish). Subhymenium not conspicuously developed. Gill trama subparallel. Pileus trama radial. Cuticle repent, with numerous scales on the disc composed of long, clavate pilocystidia which are colorless or pale fuscous and often repent. Clamp connections and lactifers none. The mounts are very milky from the granulations in the trama of gills and pileus.

Leptonia aethiops (Fr.) Gill, var. *aethiops*
No. 21887



Ch - $\times 1000$



Cuticle - *Pilocyptidia* - $\times 1000$



21887 - *Leptonia* ~~*corvina* (Kühner) comb. nov.~~
aethiops (Fr.) Gill, var *aethiops*

Pileus 12-20 mm broad, convex, then more or less plane, "mouse gray", slightly hygrophanous, paler and shining when dry, scaly, the scales more dense on depressed disc, margin incurved, even. Context pallid grayish-blue, thin; odor mild, taste sweetish.

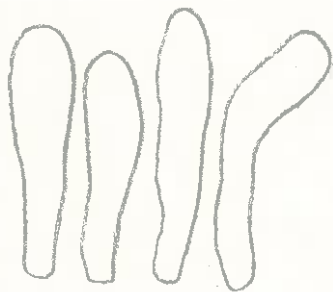
Lamellae adnexed, white, finally "pale cinnamon pink", close to nearly subdistant, broad, lamellulae numerous, edges even, concolorous.

Stipe 2.5-4 cm x 1.5-3 mm, "neutral gray", striate, glabrous throughout, hollow, equal or sub-clavate.

Spores 9-12 x 7-8 μ , 5-sided, occasionally indistinctly 6-sided. Pleurocystidia none; cheilocystidia 30-38 x 5-10 μ , clavate or sub-cylindric, more or less clustered. Subhymenium a narrow zone of small cells. Gill trama subparallel; hyphae 5-10 μ broad. Pileus trama radial (pseudoparenchymatous in tangential section). Cuticle of brownish repent hyphae, with scattered or frequent pilocystidia which are scattered or clustered, more or less clavate, with fuscous content, more or less erect (comprising the scales).

Leptomia aethiops (Fr.) Gill.

24498



ch - x 1000



24498 - Leptonia aethiops (Fr.) Gill. var. aethiops
~~Coronula var. cyathodora var. nov.~~

25636

LEPTONIA AETHIOPS (Fr.) Gill. *var. aethiops*

Pileus 12-24 mm broad, convex, expanding, umbilicate, blackish or brownish but with black scales which are dense on disc, radiately fibrillose, not striate. Context dingy bluish-grayish; odor mild, taste slightly grassy.

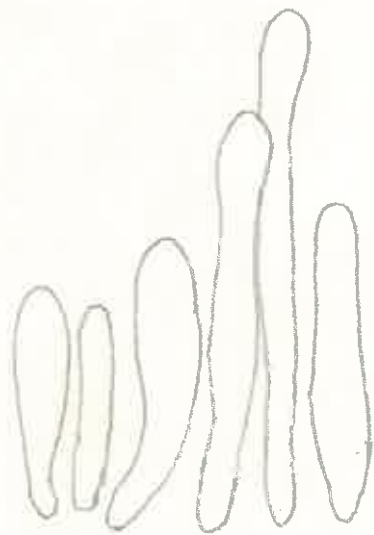
Lamellae adnate, white then pinkish-cinnamon, broad, close, edges concolorous.

Stipe 3-5 cm x 1-2 mm, blackish, ("dark mouse gray"), glabrous, base white-mycelioid, equal, hollow.

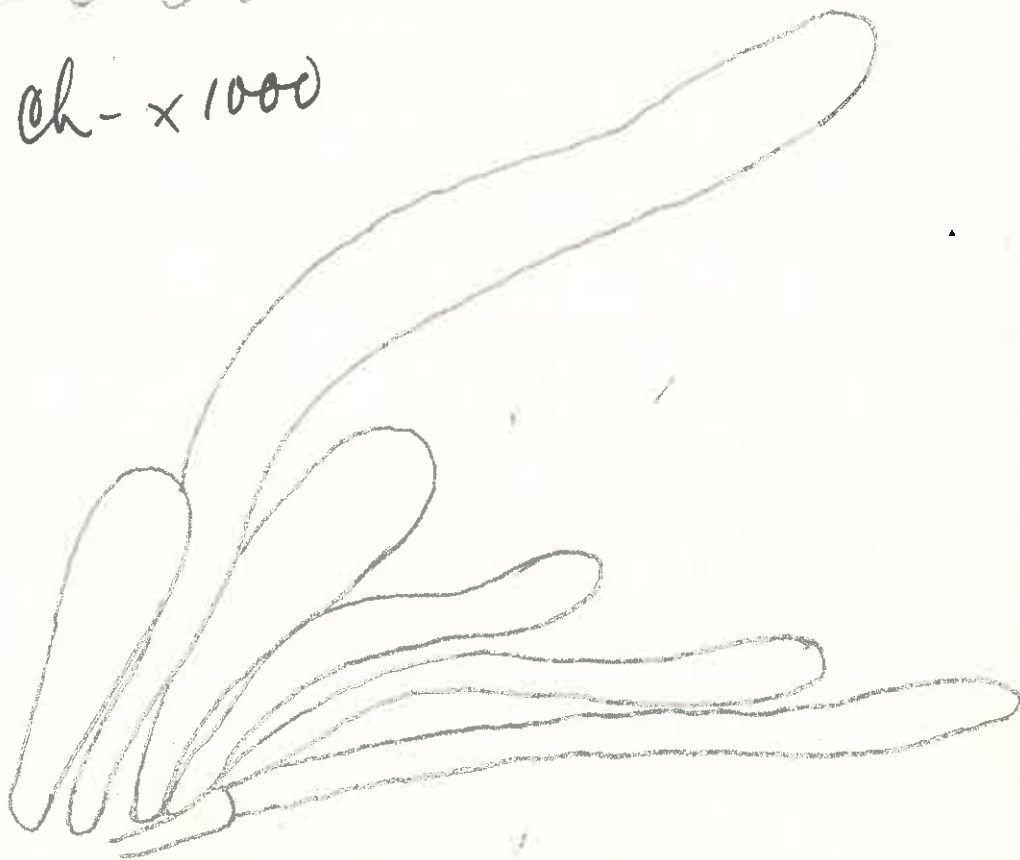
Spores 9-12 x 6-7 μ , 5-7-sided, often irregularly or indistinctly so. Basidia 27-33 x 8-9 μ , 2-4-spored. Pleurocystidia none; cheilocystidia 28-66 x 5-9 μ , cylindric or clavate, often collapsed against gill-edge. Gill trama nearly parallel, hyphae 4-8 μ . Subhymenium a narrow band of slender (1.5-3 μ) hyphae. Pileus trama cellular in tangential section. Cuticle a zone of repent or erect brown hyphae, bearing brown elements usually long-clavate-pilocystidia, 50-150 x 7-15 μ , often in clusters (scales). Clamp connections none.

On soil, pine woods, Metcalf Bottoms, GSMNP, June 29, 1963.

Leptomia aethiops (Fr.) Gill.
No. 25636



ch - x 1000



Pilo - x 1000
(fusco)

27585

LEPTONIA AETHIOPS var. AETHIOPS

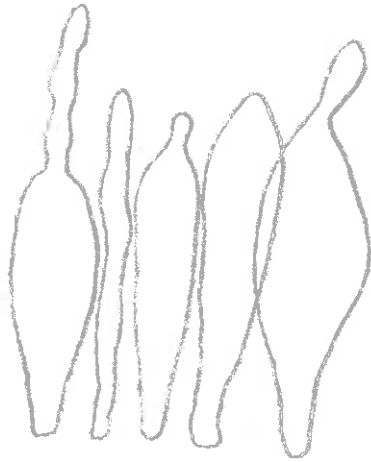
on duff, under Acer and Cornus, Macon Co., N.C. Leg.

Ron Petersen, Aug. 19, 1961.

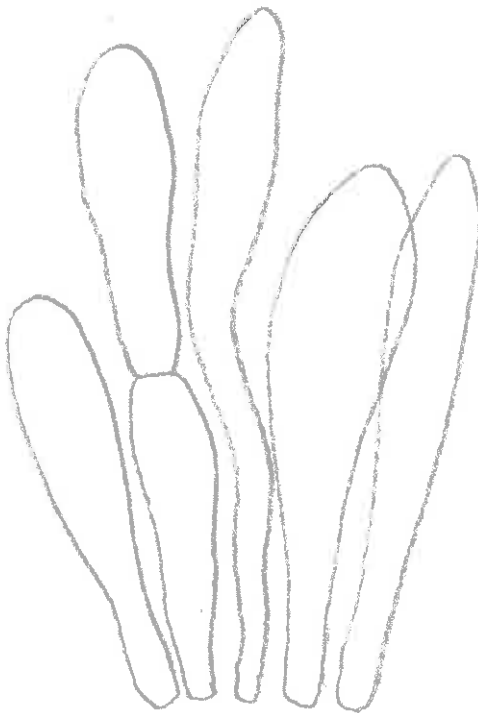
Spores 8.5-11.5 x (5)6-7 μ , 6(7)-sided. Basidia 26-32 x 6-8 μ , 4-spored. Pl. none; Ch. 43-56 x (3)8-15 μ , usually clavate, often appendiculate, more rarely filamentous. Gill trama subparallel, 4-8 μ , broad. Pileus trama radial. Cuticle fibrillose, with frequent scales composed of tufts of brownish, clavate pileocustidia, 50-92 x 11-18 μ . Clamps none.

Leptoma aethiops (Fr.) Gill. var. *aethiops*

No. 27585



Ch - x 1000



Pileo - x 1000

AGARICUS (LEPTONIA) AETHIOPS Fr.

Ellis Collection

In swamp, among moss, July 27, 1887; location ? (New Jersey?) -
Borrowed from N.Y. Bot. Garden.

Spores 9.5-12 x 6.5-8 μ , 6-sided. Basidia 32-40 x 9-10 μ ,
4-spored. Pleurocystidia and cheilocystidia none. Gill trama
(structure and hyphal arrangement uncertain). Pileus trama
radial. Cuticle of repent hyphae, bearing fuscous, clavate-
cylindric pilocystidia. Clamps none.

Clearly cheilocystidia are absent; and it is therefore
different from European L. aethiops. Assuming that it had the
colors of the European species, Ellis' collection might very
well be L. nigroviolacea Orton.

AGARICUS (LEPTONIA) AETHIOPS Fr.

Ellis Collection

In swamp, among moss, July 27, 1887; location ? (New Jersey?) -
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Spores 9.5-12 x 6.5-8 μ , 6-sided. Basidia 32-40 x 9-10 μ ,
4-spored. Pleurocystidia and cheilocystidia none. Gill trama
(structure and hyphal arrangement uncertain). Pileus trama
radial. Cuticle of repent hyphae, bearing fuscous, clavate-
cylindric pilocystidia. Clamps none.

Clearly cheilocystidia are absent; and it is therefore
different from European L. aethiops. Assuming that it had the
colors of the European species, Ellis' collection might very
well be L. nigroviolacea Orton.

28177 LEPTONIA AETHIOPS var. AETHIOPS

Metcalf Bottoms, GSMNP, Aug. 31, 1965

Spores 8-11 x 5-6 μ , 5-6-sided. Pl. none; Ch 38-54 x 5-11 μ , clustered, clavate, colorless. Pilocystidia brownish, clavate, in tufts. Caulocystidia cylindric-clavate, 38-64 x 4-7 μ , colorless.

Pileus blue-black. Gills white, edges concolorous.
Stipe livid.

Upper limit of spore-size (length and breadth) low for this species.

29244

RHODOPHYLLUS AETHIOPS var. AETHIOPS

Horse Cove, leg. Ron Petersen, Aug. 10, 1966

Pileus blue-black then near "mouse gray," but with a grayish brown tint, with dark olivaceous fibrils ends of which form scales which are dense on depressed disc, margin translucent-striate. Context bluish; odor of mice, taste rather unpleasant.

Lamellae sinuate, medium broad, close, white at first.

Stipe "cinereous," apex pruinose, elsewhere, glabrous, equal, base sub-bulbous, solid then hollow, interior concolorous (bluish).

Spores 9-13 x 6-8 μ . Pleurocystidia none; cheilocystidia 35-60 x 6-12 μ , clavate-cylindric, pale fuscous. Pilocystidia present.

13965 LEPTONIA AETHIOPS var. CYSTIDIOSA var. nov.

(Same as No. 24498)

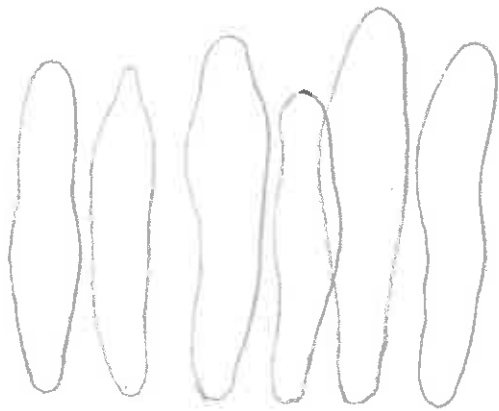
Pileus 18 mm broad, depressed, disk squamulose, blue-black, margin even. Context pale bluish; odor and taste mild.

Lamellae adnate to adnexed, white then flesh color, medium broad, edges concolorous.

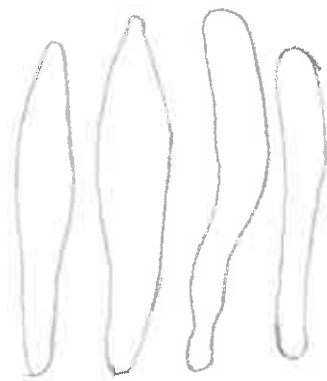
Stipe 4 cm x 4 mm, blue-black, not paling, equal.

Spores 8-11.5 x 6-7 μ , 5-sided. Basidia 30-38 x 9-11 μ , 4-spored. Pleurocystidia 37-56 x 8-12 μ , scattered, not conspicuous; cheilocystidia clavate, 33-48 x 6-9 μ , clustered. Gill-trama subparallel. Subhymenium a narrow zone of flat cells. Pileus trama radial. Pilocystidia clavate, fuscous, 63-76 x 15-20 μ .

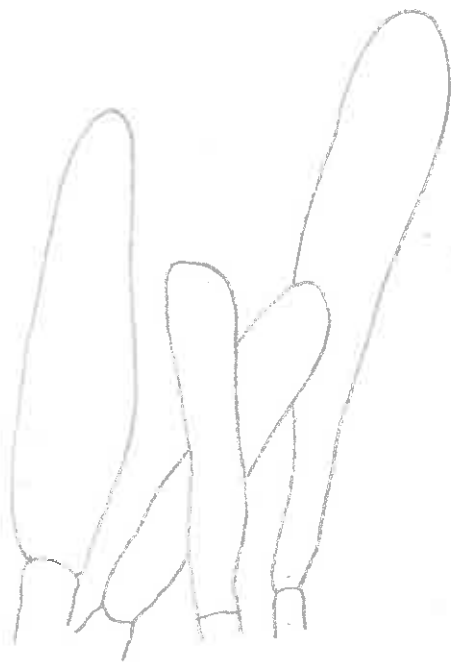
Leptonia *aethiops* var. *cystidiacea*
1396b



Pl - x 1000



Ch - x 1000



Cuticle - x 1000

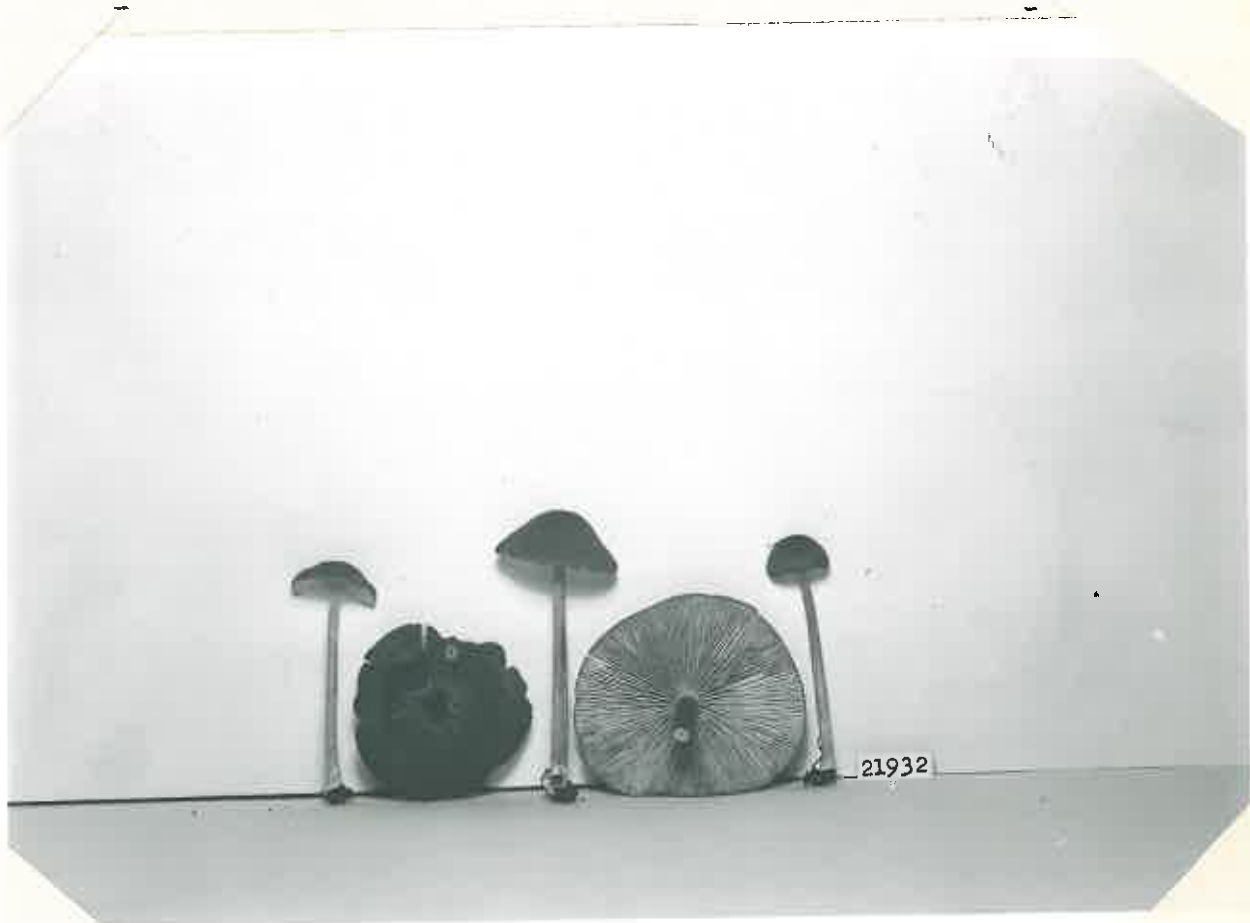
Pilocyptidia

Pileus 1.5 cm broad, convex, disk depressed, somewhat hygrophanous, "deep Quaker drab" to metallic blue, fading somewhat in age, fibrillose subscaly, disk densely so, margin incurved and even when young, striatulate when old. Context white, thin; odor slight, taste sweetish.

Lamellae adnexed, grayish-white then "pale pinkish cinnamon", close, medium broad, broadest behind, narrowed in front, edges concolorous, fimbriate.

Stipe 3-6 cm x 2-3 mm, steel-blue, apex whitish, base white-mycelioid, pruinose above, elsewhere silky, equal, dry, hollow.

Spores 9-11.5 x 6-7.5 μ , 5-sided, at times indistinctly 6- or 7-sided. Basidia 32-37 x 8-10 μ , 4-spored. Pleurocystidia 30-50 x 6-10 μ , clavate, subfusoid, rounded, appendiculate or mucronate, scattered and very rare; cheilocystidia cylindric to fusoid, 33-68 x 5-12 μ . Subhymenium of small cells. Gill trama subparallel. Pileus trama radial. Cuticle repent, with numerous scattered or clustered more or less erect, clavate pilocystidia, 50-80 x 10-15 μ .

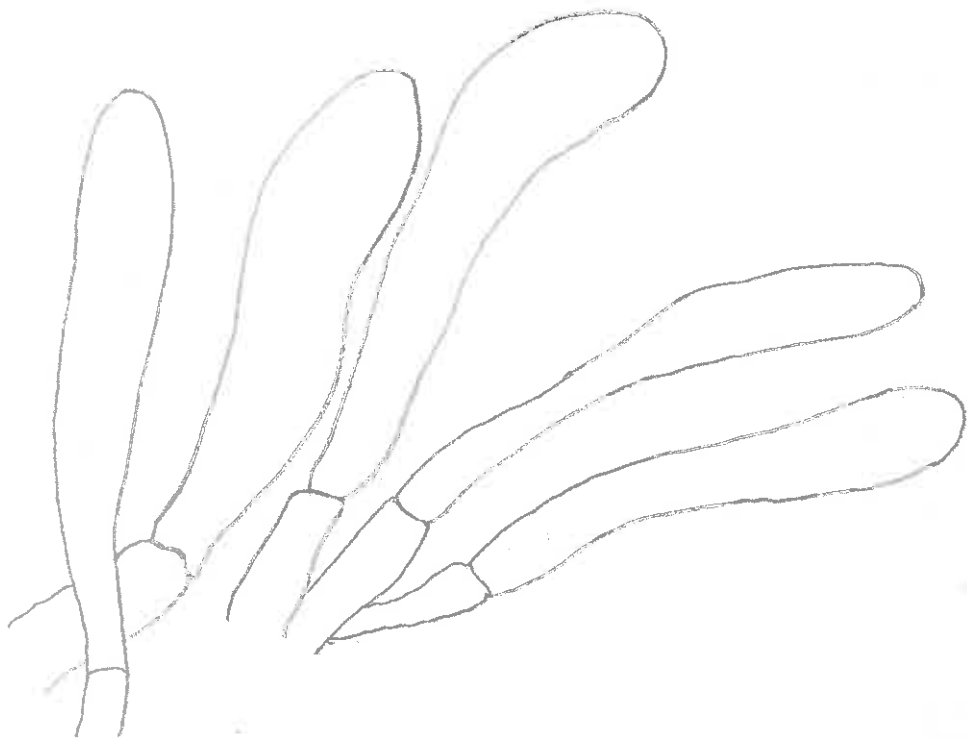
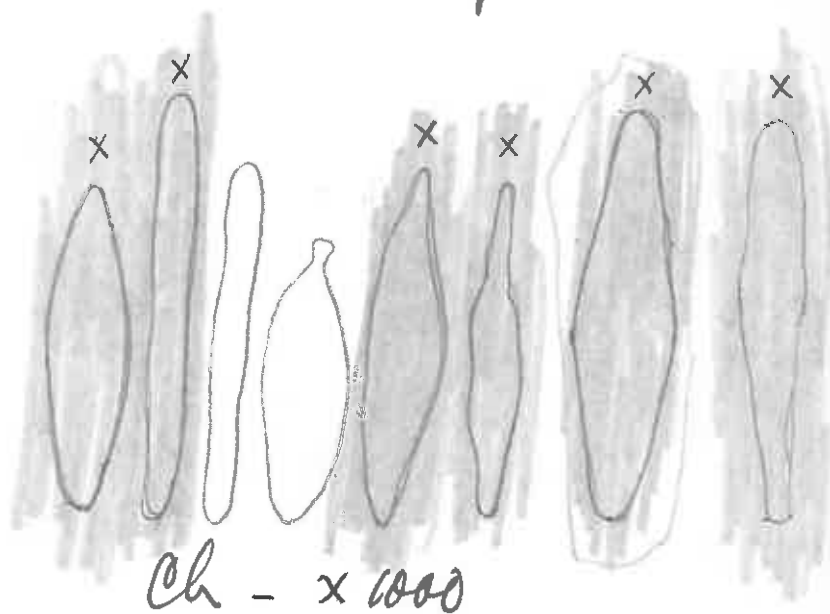
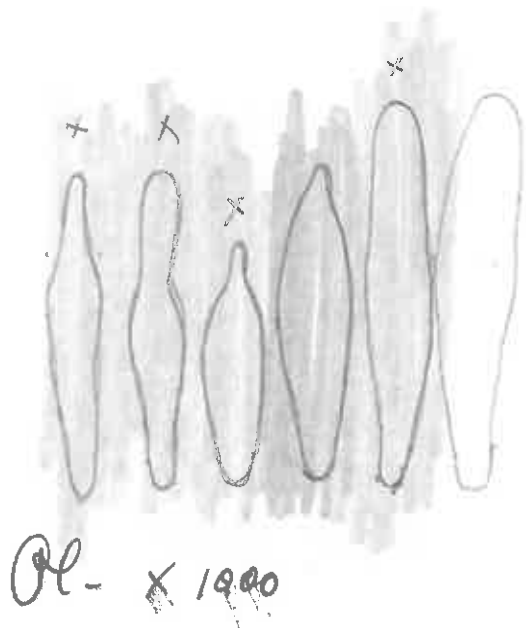


21932 - *Leptomyces* ^{*aethiops*} ~~*cornutus*~~ var. *cyrtidiosa* var. nov.

Septoria No. 21932

aethiops var. cyclidiosa var. nov.

Type



29194

RHODOPHYLLUS AETHIOPS var. *CYSTIDIOSUS*

On soil, among moss, Cades Cove, July 20, 1966,
leg. Gary Morton.

Pileus convex, nearly expanding, umbilicate, blue-black then fading to smoky brown or dingy bluish, densely fibrillose, even or faintly striate in age. Context blue, fading in age; odor and taste mild.

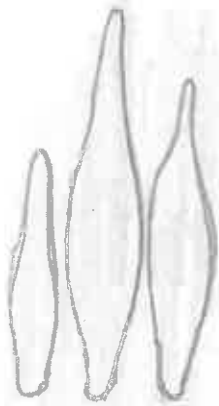
Lamellae adnate or adnexed, white then pink, close, medium broad behind, narrowed in front, edges concolor.

Stipe "cinereous," fading little or none, apex pruinose, flesh concolor, hollow, equal.

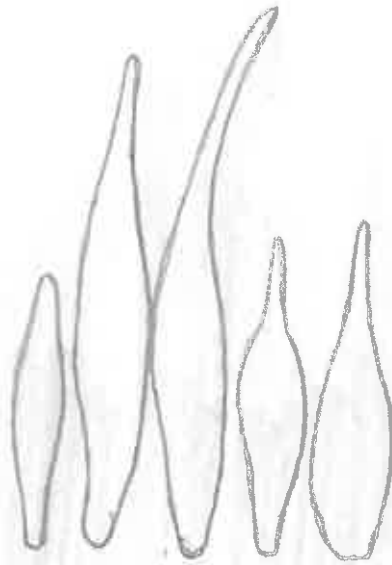
Spores 8-11 x 6-7.5 μ , 5(6)-sided. Pleurocystidia 32-50 x 6-11 μ , rare, ventricose, apex tapering; cheilocystidia 36-71 x 7-12 μ , ventricose or flask-shaped with a long tapering neck. Gill trama subparallel, hyphae 5-8 μ broad. Subhymenium not distinctive. Pileus trama radial. Cuticle bearing tufts of brownish to colorless, clavate pilocystidia, 53-88 x 10-18 μ . Caulocystidia in tufts, colorless, clavate, 47-100 x 6-9 μ .

Rhodophyllus aethiops var. *cystidiosus*

Tenn - 29194



Gl - x 1000



Ch - x 1000

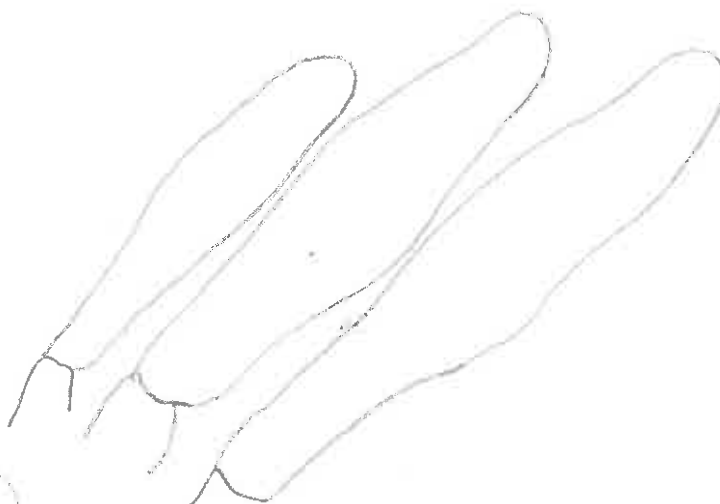
Pileus 12-25 mm, convex, disk depressed and fibrillose to sub-scale, "snuff brown," to "buffy brown," hygrophanous, margin striatulate when moist. Context thin, whitish, odor and taste mild.

Lamellae adnexed, finally seceding somewhat, broad, subdistant, whitish then flesh colored, edges concolorous.

Stipe 3-6 cm x 1-3 mm, glabrous, dingy brown, base white-mycelioid.

Spores 8-11 x 6-8 μ , 5-6-sided, some indistinctly so, Basidia 23-31 x 8-10 μ , 2- and 4-spored. Pleurocystidia and cheilocystidia none. Subhymenium scarcely differentiated. Gill trama subparallel. Pileus trama radial. Cuticle of repent, brown hyphae, with scattered clusters of fuscous pilocystidia. Clamp connections none. Lactifers none. The cuticular hyphae at times show conspicuous granulations (see K. & R., p. 176, fig. 244A).

Leptonia 9241
alabamensis



(2)
Pileocystidia - x 1000

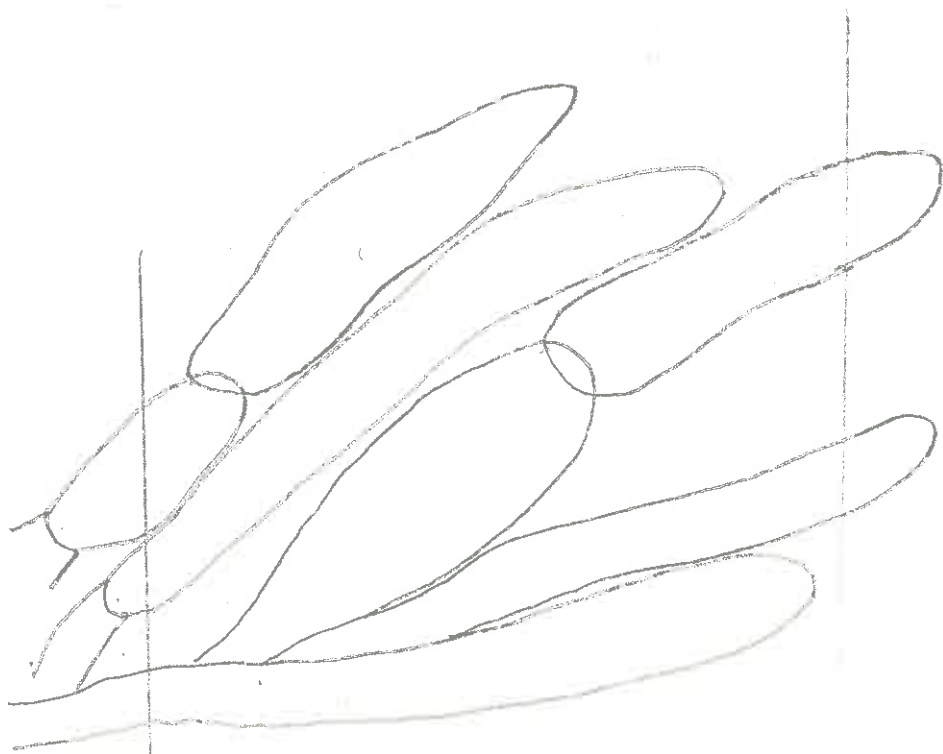
alachuanus

Name
used

Nolanea alachuana Murr., Torrey Bull. 67:60. 1940.	alachuanum
Entoloma alachuanum Murr., Mycol. 33:443. 1941.	fuscodiscum
Leptoniella alachuana Murr., Florida Acad. Sci. Proc. 7:117. 1945.	violaceobrunneum

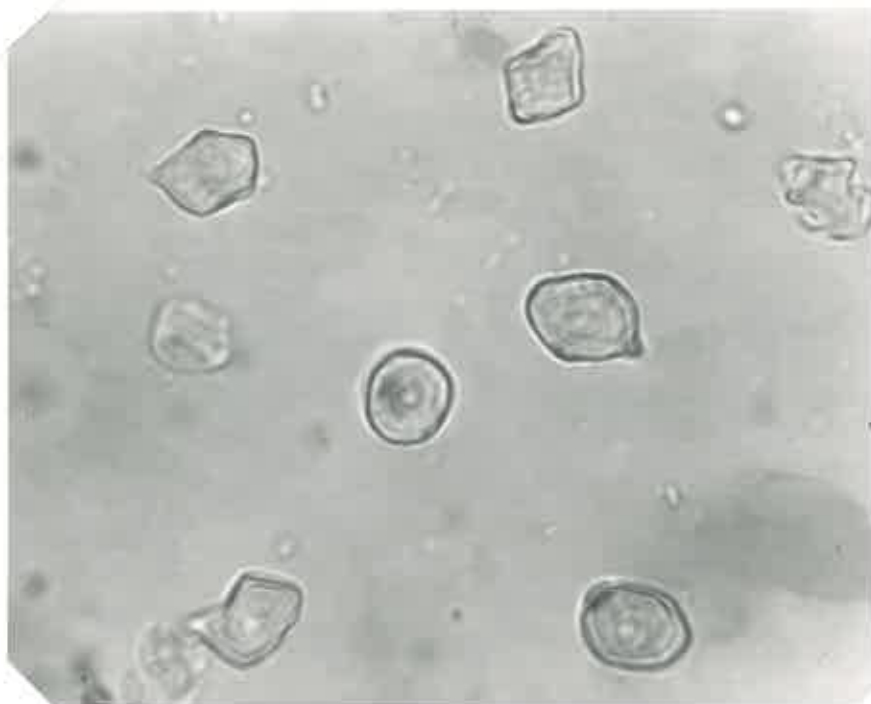
Septoria ^{R.} *alachuana* ^{us} (Murr.)

Type (*Nolanea alachuana*, 712246)

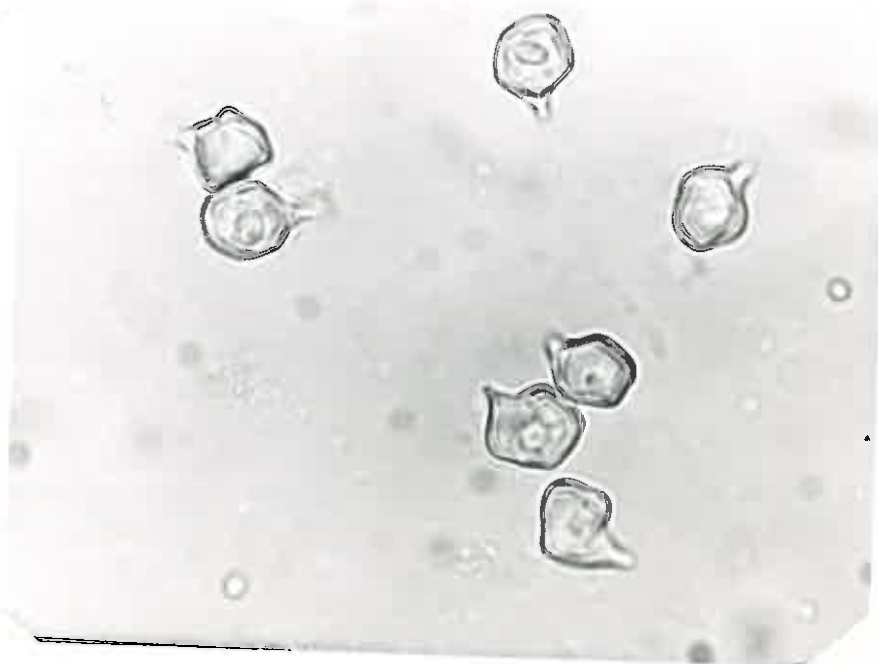


(3)

Cuticle - $\times 1000$



Leptonia alachuana (Murr.) Murr.



Eutoloma alachuanum Murr. - Type
 x 1700 = fascodiscum nom. nov.

Photo by T.H. Campbell

24543

NOLANEA ALBA sp. nov.

TYPE

Pileus 2-3 cm broad, more or less umbonate, white, silky.
Context white; odor mild, taste farinaceous-bitter.

Lamellae adnexed, white then flesh pink, medium broad
to broad, subdistant, lamellulae numerous.

Stipe 3-5 cm long, 2-3 mm thick, white, silky.

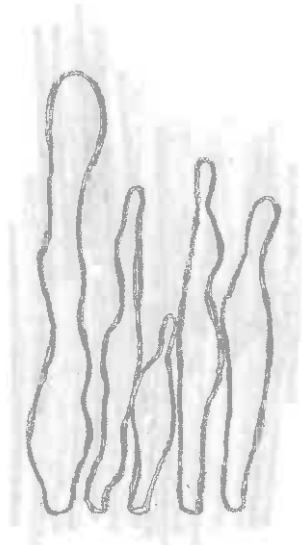
Spores 9.5-12 x 7-9 (10) μ , ellipsoid to subglobose,
6-sided, at times obscurely 5- or 6-sided. Basidia 38-54 x
10-13 μ , 2-4-spored. Pleurocystidia ^{mult;} ~~elevate, often more or~~
~~less mucronate, 40-46 x 11-12 μ~~ ; cheilocystidia 43-61 x 4-8 μ ,
conspicuous, cylindric, obclavate, often irregularly constricted.
Gill trama subparallel, hyphae 6-14 μ . Pileus trama radial.
Cuticle repent, with rather numerous loosely-tangled surface
hyphae, the terminal elements clavate or cylindric, -- cystidioid.
Clamp connections and lactifers none.

Differs from E. sericellum which becomes pinkish cream,
has a mild taste, glabrous stipe, close gills, is not umbonate
(but is depressed).

Rhodophyllus (Nolanea) albus sp. nov.

Teun - 24543

Type



Ch - x 1000

26298

RHODOPHYLLUS ALBUS

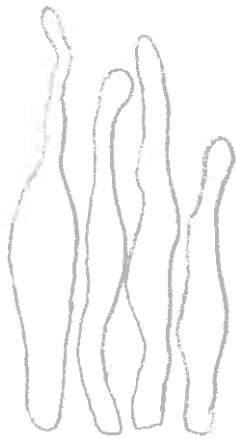
Mt. LeConte, Aug. 5, 1964

White overall; gills finally pink. (Cf. collections from Boarts).

Spores and cheilocystidia as in TYPE (24543).

Rhodophyllus albus

26298



Ch - x 1000

29193

RHODOPHYLLUS ALBATUS sp. nov.

TYPE

On soil, in pine-deciduous woods, Gades Cove,
leg. Ron Petersen, July 20, 1966.

Pileus 7-12 mm broad, convex, depressed-umbilicate, white and remaining so, minutely and sparsely silky, dry, margin even. Context white; odor and taste mild.

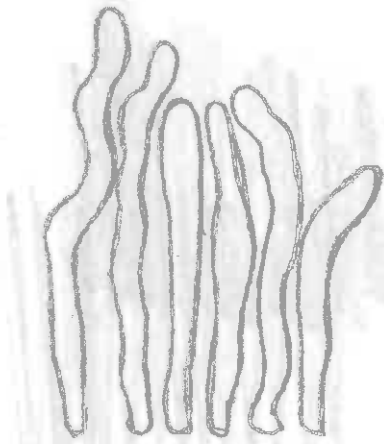
Lamellae adnate, at first white, finally pale flesh-tinted, medium broad, subdistant, edges fimbriate.

Stipe 2.5-3.5 cm long, 0.5-1 mm thick, white, pruinose above, base white-mycelioid, elsewhere glabrous, equal, hollow.

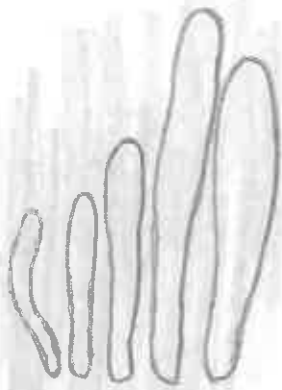
Spores 8-10.5 x 6.5-7 μ , 5-sided. Basidia 23-28 x 5-6 μ , 4-spored. Pleurocystidia none; cheilocystidia 37-55 x 4-5 μ , filamentous-cylindric, often flexuous. Gill trama subparallel, hyphae 3-5 μ broad. Subhymenium not distinctive. Pileus trama radial. Cuticle of repent hyphae. Clamp connections and lactifers none.

Rhodophyllus albatrus sp. nov.

Tenn - 29193 (type)



Ch - x 1000



Caule - x 1000

ENTOLOMA ALBIDIFORME Murr.

Florida Acad. Sci. Proc. 7:116. 1945

Pileus 4.5 cm, broad, convex to slightly depressed with a small but distinct umbo, avellaneous with a slight rosy tint, hygrophanous, shining and nearly white in drying, glabrous, marked with a few scattered radiating whitish ridges, margin even, undulate to slightly lobed. Context very thin, pallid, ^{none} ~~odorless~~, taste mild.

Lamellae sinuate, pallid to dull-pink, very broad behind, distant, entire, the shorter ones much narrower.

Stipe 5-6 cm, ^{long,} ^{thick,} 4-8 mm, ^a pearly-white, strongly tapering upward, pruinose to subglobose, grooved.

Spores 9-11 x 7-8 μ , 5-sided, pink. Basidia 30-35 (40) x 10-12 μ , 2-4-spored. Pleurocystidia and cheilocystidia none. Gill ^{trama} ~~trama~~ subparallel, hyphae 5-9 μ broad. Pileus trama radial. Cuticle repent; no pilocystidia. Clamps none. Lactifers present in the trama of the pileus and gills.

Habit, habitat, and distribution - On mossy soil, under hardwoods ~~trass~~, Florida, August.

Material studied. - FLORIDA: Murrill F17391, type, ^{from} ^{near} Gainesville, collected by West ^{and} ~~X~~ Murrill, August 2, 1938.

Observations. - The description of the microscopic characters above is based on a study of the type. Murrill says that it becomes almost white soon after being placed in the drying oven.

~~This may well be assigned to Entoloma, but it is also Nolanca-like in appearance.~~

ENTOLOMA ALBIDUM Murr.

North Amer. Flora 10:119. 1917

3-6

Pileus 5 cm. broad, convex to plane or slightly depressed, ^{hygrophanous,} white, becoming ^{grayish when wet,} tinged avellaneous with age ^{or on drying,} glabrous, shining, margin entire or slightly lobed, ^{striatulate when wet,} even when dry. Context white; odor mild, taste slightly ^{farinaceous-bitter.}

Lamellae sinuate, salmon-colored, rather narrow, crowded, ^{nearly even.} edges ~~entire~~ ^{white then} ^{lose or nearly}

5-9 cm long, 6-10 mm thick,

Stipe about ~~8 cm. x 10 mm.~~ white, equal or slightly tapering upward, ^{apex squamulose, elsewhere fibrillose, base ± curved,} ~~stuffed then hollow.~~ in deposit: "orange cinnamon,"

Spores $8.5-11 \times 7-8 \mu$, globose, subglobose, ovoid or ellipsoid, 5-6-sided, ^{sometimes} ~~often~~ obscurely 5-6-7-sided, ~~asymmetrical.~~

Basidia $27-36 \times 8-10 \mu$, 2-4-spored. Pleurocystidia none; cheilocystidia ³⁰⁻⁴⁸ ~~34-41~~ $\times 3-7 \mu$, cylindric, ^{clavate, at times subcapitate,} ~~rare,~~ often collapsed.

~~(see drawings from No. 23518).~~ Gill trama subparallel, hyphae 7-15 μ broad. Pileus trama radial. Cuticle repent, with a few hyphal ends more or less uplifted. Clamps and lactifers none.

Habit, habitat, and distribution. - On soil, edge of woods, ^{and Tennessee,} Massachusetts, September, ~~October.~~

Material Studied. - MASSACHUSETTS: Murrill & Thompson, type, Sept. 3, 4, 1911, near Stockbridge; Tennessee: M. Boarts (Tenn-23518).

Observations - Our Tennessee collection agrees ~~well~~ with the type in general appearance. ~~Murrill says nothing of pileus striations, nor of gill color or the young gills. Microscopically they agree and in the microscopic character.~~

~~Entoloma~~
ENTOLOMA ALBIDUM Murr.

albidum Murr.

In rather thin soil, edge of woods, Stockbridge, Mass.,
leg. Murrill & Thompson, Sept. 3-4, 1911.

TYPE

Spores 8.5-11 x 7-8 μ , globose, subglobose, ovoid,
or ellipsoid, 5-6-sided, Basidia 27-36 x 9-10 μ , 2-4-spored.
Pleurocystidia none; cheilocystidia 34-41 x 3-7 μ , cylindric,
rare, often collapsed. Gill trama subparallel, hyphae
7-15 μ broad. Pileus trama radial. Cuticle repent, a
few hyphae ends uplifted ^{as clavate, colorless} pileocystidia, ^C clamp connections_x
and lactifers none.

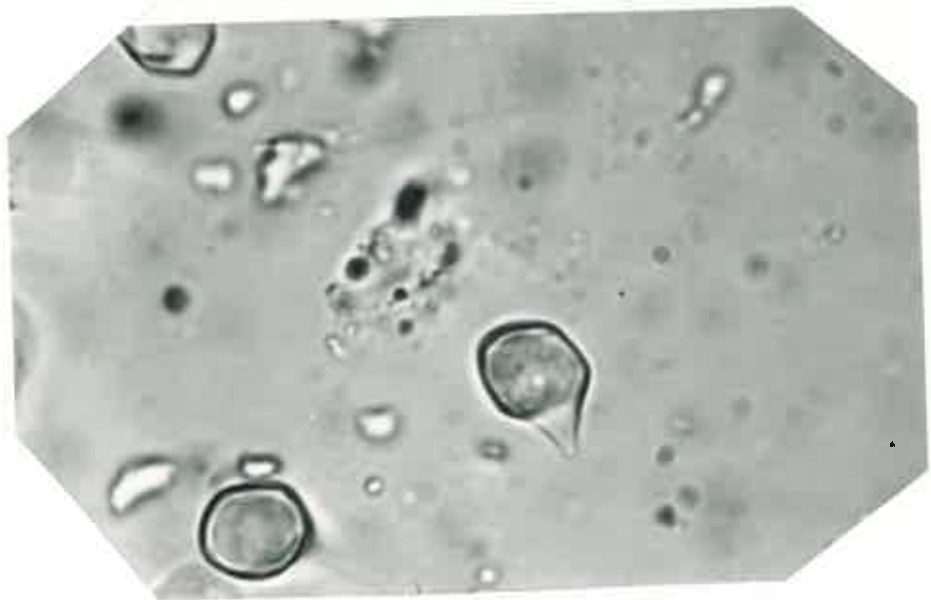
LEPTONIA ALBINELLA Pk.

New York State Mus. Bull. 1(2): 6. 1888.

THE TYPE

(from Sandlake, N. Y., July)

Spores 9-12 x 6.5-8 μ , mostly 6-sided, some obscurely 5- or 6-sided, symmetrical. Basidia 28-34 x 9-11 μ , 2-4-spored. Pleurocystidia and cheilocystidia none. Gill trama subparallel. Pileus trama radial (appearing as pseudoparenchyma in tangential sections). Cuticle repent, at times hyphal clusters are more or less uplifted, the terminal elements as pilocystidia. Clamp connections and lactifers none.



Leptonia albidella PK. - Type

x 1800

12848

LEPTONIA ALBINELLA Pk.

on humus, deciduous woods
near Mt. LeConte, GSMNP, Aug. 25, 1940

Pileus 7-30 mm broad, conic-convex, at times depressed on disk, not hygrophanous nor viscid, "pale pinkish buff," disk tinted tawny-olive, whitish fibrillose to minutely squamulose, micaceous-shining, margin striate; surface with more or less erect tangled hyphae (about 7-10 μ diam.). Context thin, white; odor none, taste mild.

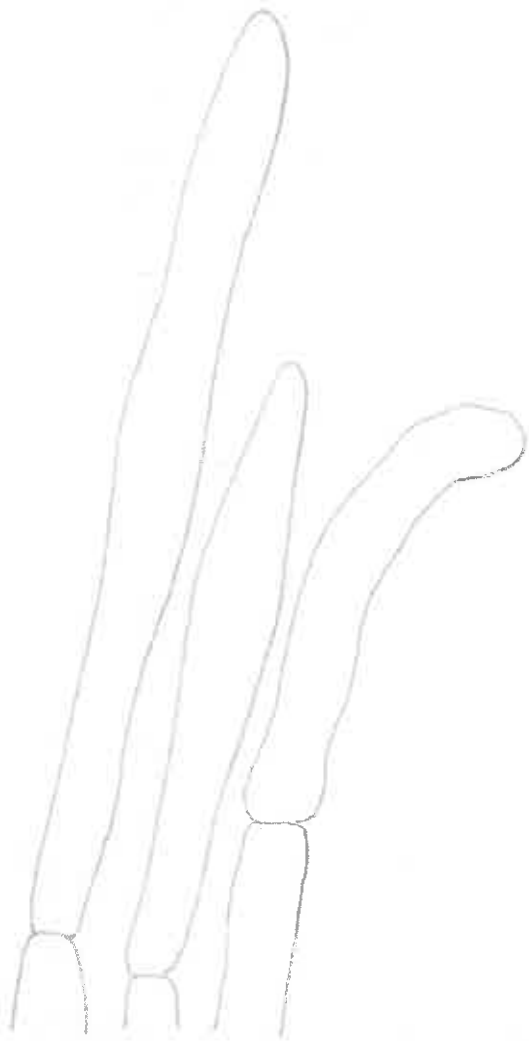
Lamellae emarginate or uncinatae, close to subdistant, narrow, white at first, then "pale pinkish cinnamon," edges even or rough.

Stipe 3-6 cm x 1-4 mm, solid or stuffed, becoming hollow, soft and fragile, white, apex pruinose, elsewhere glabrous, equal.

Spores 9.5-13 x 6.5-8 μ , angular, at times nodulose-angled, 5-6-sided, at times indistinctly 7-sided, symmetrical. Pleurocystidia and cheilocystidia none. Gill trama undulating, sub-parallel, cells 7-14 μ diam. Pileus trama radial (appearing as pseudoparenchyma in tangential sections). Cuticle of repent hyphae, often loosened and more or less erect, the terminal elements as pilocystidia. Clamps and lactifers none.

Leptonia albinella H.

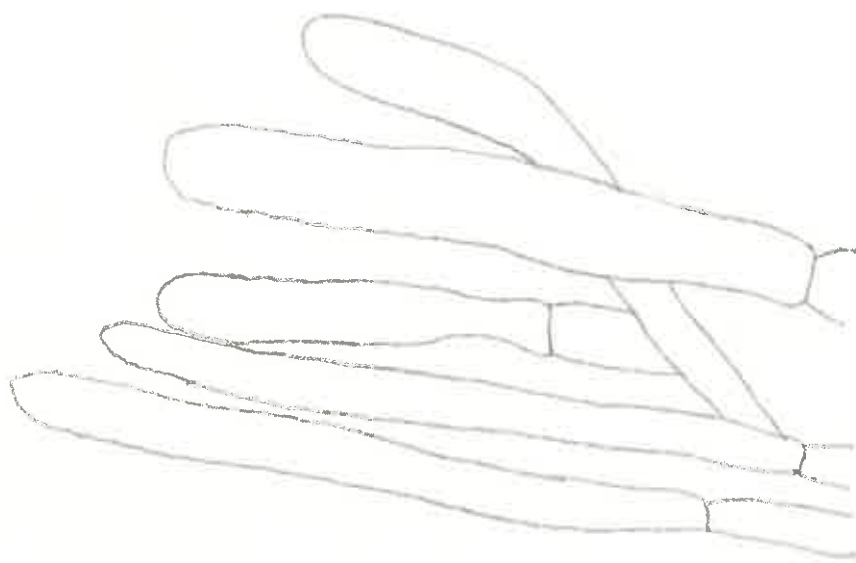
No. 12848



Pilocystidia - $\times 1000$

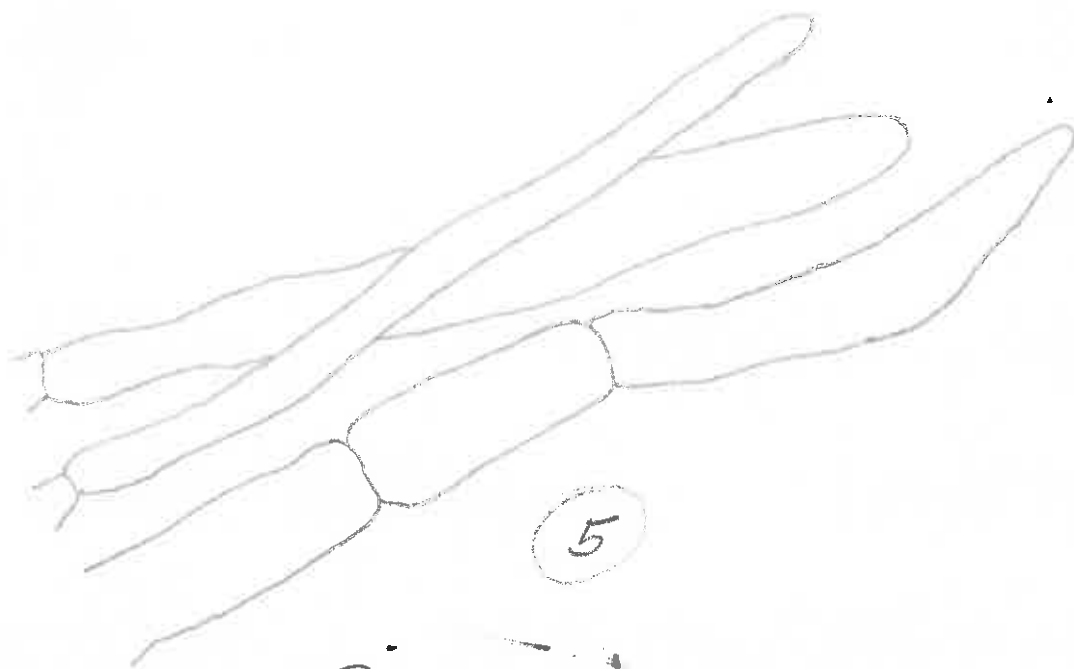
Leptonia albinella PK.

No. 12875



Pilearyctidia - $\times 1000$

Leptonia albinella PK.
No. 13865



Pibocryptidea - x 1000

20517

LEPTONIA ALBINELLA Pk.

Pileus 15-20 mm., white, shining, hygrophanous, convex-hemispheric, then convex-expanded, not umbonate, disk usually depressed and yellowish, densely fibrillose-silky, margin rosy and short-striate (wet). Context thin, white; odor and taste none.

Lamellae adnate decurrent, subdistant, broad, edge slightly rough.

Stipe 3-5 cm. x 1 mm., white, shining, cartilaginous, solid, glabrous, apex slightly pruinose, dry.

Spores 9-12 x 6.5-8.5 μ , angular, 5-6-sided, symmetrical. Pleurocystidia and cheilocystidia none. Gill-trama subparallel. Pileus trama radial. Cuticle repent, several hyphal ends loosened (to form a fibrillose surface).

22399

LEPTONIA ALBINELLA Pk.

Pileus 10-15 mm., white, depressed, fibrillose. Context fragrant. Lamellae adnate, close, white. Stipe 2.5-4 cm. x 2-3 mm., white.

Spores 9-12 x 6-7.5 μ , 6-sided, symmetrical. Basidia 28-33 x 8-10 μ , 4-spored. Pleurocystidia and cheilocystidia none. Gill trama subparallel. Cuticle repent, with free ends rather numerous.

Rhodophyllus albes nom. nov.

~~ENTOLOMA FLORIDANUM Murrill~~

Florida Acad. Sci. Proc. 7:116. 1945

Pileus 5-7 cm, broad, convex to plane, gregarious, uniformly avellaneous, smooth, glabrous, shining when dry, margin even. Context firm, white, unchanging; odor and taste strongly farinaceous.

Lamellae sinuate ^{white} to pink, broad, not crowded, 3-4 times inserted, entire.

Stipe 4-6 cm, x 10-20 mm, subequal, smooth, glabrous, milk-white, stuffed.

Spores ~~9-12 x 5-8 μ~~ ^{8.5-10.5 x 7-8 μ, 5(6)} 5-6-sided, ellipsoid to ovoid, pink.

Basidia 33-42 x 8-10 μ, 2-⁴-spored. Pleurocystidia and cheilocystidia none. Gill trama subparallel, hyphae 5-8 μ broad, with a brown ^{Subhymenium gelatinous.} mediostrate. Pileus trama radial. Cuticle ^{dry,} repent, with numerous surface hyphae more or less uplifted; no pileocystidia. Clamps ^{connections} and lactifers none.

Habit, habitat, and distribution - On soil, under laurel oak, Florida, November.

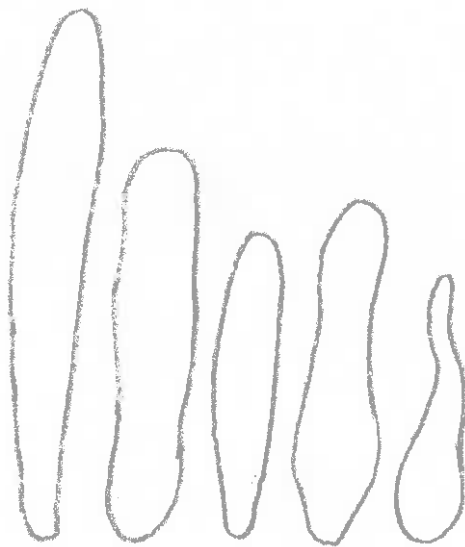
Material studied. - FLORIDA: Murrill F10012, type, from Gainesville, Nov. 22, 1932; 718794.

Observations - The description of microscopic characters above is based on a study of the type. Murrill says it is near Ent. griseum but ^{the} stipe is pure white; also near Ent. grayanum ^{which} but ~~the stipe is too short and thick for that species.~~ ^{has an avellaneous pileus} ~~has spores 8-10~~ 8.5-10 x 7-8 μ, and a longer stipe. This may be a ^{color} form of E. grayanum. ~~It is~~ ^{color} ~~caespitosum Murr.~~ spores are like those of E. grayanum.

Nolanea 24422

~~albostipes~~ sp. nov.

albipes sp. nov. Type



Ch - x 1000

29439

RHODOPHYLLUS ALBOFUMEUS sp. nov.

TYPE

Under beech, Hesler's woods, Oct. 2, 1966

Pileus 3-4 cm broad, dry, white, silky-appressed, campanulate, obtusely umbonate, not hygrophanous, margin even. Context white; odor mild, taste mild becoming slightly farinaceous.

Lamellae emarginate, white, then pink, close, rather broad.

Stipe 4-7 cm long, 2-3 mm thick, white, equal above the subclavate base, stuffed, base white-mycelioid.

Spores in deposit: "pecan brown"; spores 8-10(10.5) x 6-8.5 μ , ovoid to subglobose, 5-sided. Basidia 33-38 x 9-10 μ , 2-4-spored. Pleurocystidia and cheilocystidia none. Gill trama subparallel, hyphae 5-12 μ broad. Subhymenium not distinctive. Pileus trama radial. Cuticle of repent hyphae. Caulocystidia in pyramidal tufts, cylindric, colorless. Pilocystidia none. Clamp connections present.

It suggests R. cinerascens which has cheilocystidia, and also R. candens which has both pleurocystidia and cheilocystidia. On being dried it becomes smoky grayish.

LEPTONIA ALBOGRISEA (Pk.) comb. nov.

Agaricus albogriseus Pk., N. Y. State Museum Ann. Rept. 31:33.
1879.

Clitopilus albogriseus (Pk.) Sacc., Syll. Fung. 5:703. 1887.

Pleuropus albogriseus (Pk.) Murr., North Amer. Flora 10:106. 1917.

Rhodophyllus albogriseus (Pk.) Sing.,

Pileus 1.2-2.5 cm broad, convex or slightly depressed at the center, white-fibrillose, pale-gray, margin even. Context firm; odor and taste farinaceous.

Lamellae adnate or slightly decurrent, grayish, then flesh-colored, moderately close, broad to medium broad, edges concolorous.

Stipe 2.5-7 cm x 2-4 mm, concolorous, glabrous, equal, solid, base white-mycelioid.

Spores 9.5-12 x 5.5-7 (7.5) μ , 5-6-sides, sometimes obscurely 5-7-sided. Basidia 30-34 x 8-11 μ , 2-4-spored. Pleurocystidia none; cheilocystidia 25-34 x 7-11 μ , cylindric, capitate, few, inconspicuous, gill-edge also fertile with basidia. Gill trama subparallel, hyphae 3-6 μ broad. Pileus trama of radially disposed hyphae. Cuticle of repent hyphae, bearing a turf of colorless hyphae. Clamp connections none.

In the dried specimens, the pileus is pale gray-brown, stipe grayish, gills broad or medium broad.

LEPTONIA ALBOGRISEA (Pk.) comb. nov.

Agricus (Clitopilus) albogriseus Pk.

Type

Collected on ground, in woods, Adirondack Mts., Gansewoort,
by C. H. Peck. (Probably 1877)

Spores 9.5-12 x 5.5-7 (7.5) μ , 5-6-sides, sometimes
obscurely 5-7-sided. Basidia 30-34 x 8-11 μ , 2-4-spored.
Pleurocystidia none; cheilocystidia 25-34 x 7-11 μ , cylindric-
capitate, few, inconspicuous, gill-edge also fertile with
basidia. Gill trama subparallel, hyphae 3-6 μ broad. Pileus
trama of radially disposed hyphae. Cuticle of repent hyphae,
bearing a turf of colorless hyphae. Clamp connections none.

In the dried specimens, the pileus is pale gray-brown,
stipe grayish, gills broad or medium broad.

LEPTONIA ALBOGRISEA (Pk.) comb. nov.

Agricus (Clitopilus) albogriseus Pk.

Type

Collected on ground, in woods, Adirondack Mts., Gansewoort,
by C. H. Peck. (Probably 1877)

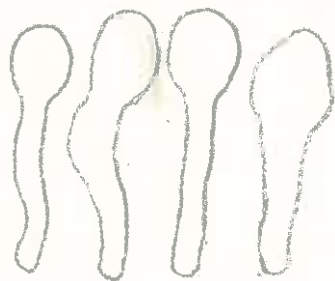
Spores 9.5-12 x 5.5-7 (7.5) μ , 5-6-sides, sometimes
obscurely 5-7-sided. Basidia 30-34 x 8-11 μ , 2-4-spored.
Pleurocystidia none; cheilocystidia 25-34 x 7-11 μ , cylindric-
capitate, few, inconspicuous, gill-edge also fertile with
basidia. Gill trama subparallel, hyphae 3-6 μ broad. Pileus
trama of radially disposed hyphae. Cuticle of repent hyphae,
bearing a turf of colorless hyphae. Clamp connections none.

In the dried specimens, the pileus is pale gray-brown,
stipe grayish, gills broad or medium broad.

Leptonia albogrisea (Pk.)

(Agaricus [Chitopilus] albogriseus Pk.)

Type



Ch. x 1000

20467

NOLANEA ALBOUMBONATA sp. nov.

TYPE

Pileus (1) 2-3.5 cm broad, campanulate-conic, margin at first incurved, umbonate, umbo whitish papillate, (then the whole pileus mammiform), radiately silky-fibrillose, shining, hygrophanous, at times "vinaceous buff," usually near "pale pinkish cinnamon," always with a grayish tint, margin even. Context white, thin; odor and taste slight (taste like mild green grass).

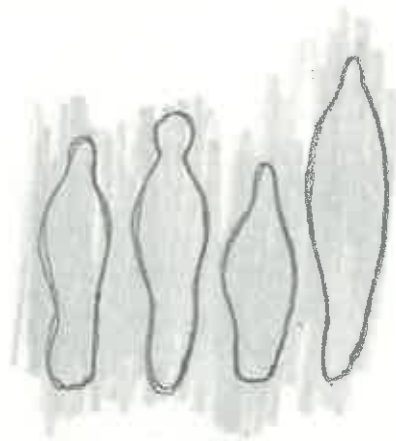
Lamellae narrowly adnate, ascending, at first pallid, finally "pale cinnamon pink," medium broad, close, transversely rugulose, edges even.

Stipe 5-8 cm long, 1.5-3 mm (at times 5 mm below) thick, cartilaginous, dry, "hair brown," apex paler, fibrillose above, glabrous downward, base white mycelioid, base slightly enlarged, hollow, easily splitting longitudinally.

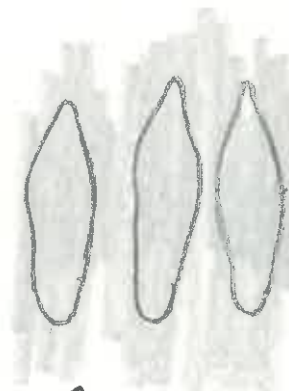
Spores 8.5-11.5 x 7-8.5 μ , quadrate or subquadrate, often irregularly 4- or 5-sided. Basidia 30-41 x 9-11 μ , 2-4-spored. Pleurocystidia 28-43 x 9-11 μ , clavate, subfusoid, apices pointed (submucronate), or capitate to subcapitate; cheilocystidia similar, 26-30 x 9-10 μ . Gill trama subparallel, hyphae 4-10 μ broad. Pileus trama radial. Cuticle repent. Clamp connections and lactifers none.

Nolanea No. 20467
(= *N. alboumbonata*)

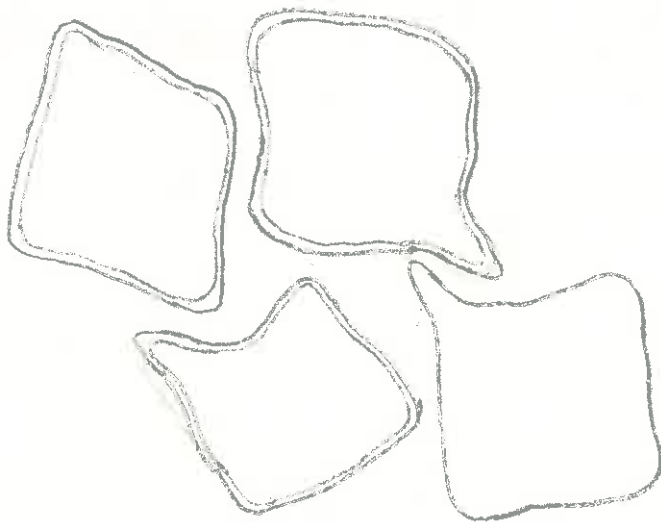
Type



Pl - x 1000



Ch - x 1000



Spores - x 4000

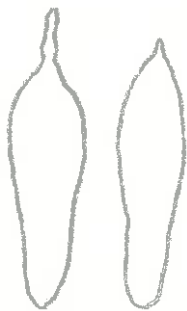


20467 - *R. alboumbonatus* - Type

alboubonata
NOLANEA NO. 24497

Spores 9-10 x 7-8 μ , 5-sided, at times obscurely 4-5-sided. Basidia 25-32 x 7-9 μ , 2-4-spored. Pleurocystidia 33-38 x 8-9 μ , clavate, mucronate or appendiculate, inconspicuous; cheilocystidia 24-26 x 7-9 μ , clavate, more or less mucronate, rare. Gill trama subparallel, hyphae 6-11 μ broad. Pileus trama radial. Cuticle repent. Clamps, pilocystidia, and lactifers none.

Nolanea No. 24497
albouborata



Pl - x 1000



Ch - x 1000

24702

NOLANEA ALBOUMBONATA

PHOTO

Toxaway Gorge, June 15, 1962

(Cf. No. 24497)

Pileus avellaneous or grayish-avellaneous, umbo pallid or white, at times faintly zonate. Stipe 5-11 cm x 1.5-3 mm, near deep mouse gray.

Spores 9-11 x 6-7 μ , 4-5-sided. often obscurely 5-sided. Basidia 32-37 x 6-8 μ , 4-spored. Pleurocystidia 34-40 x 8-10 μ , clavate; cheilocystidia 26-34 x 6-9 μ , subventricose or clavate.



24702 - *R. alboumbonatus*

30217

ENTOLOMA ALBUM

On litter in deciduous woods, Fort Hill State Memorial,
Highland Co., Ohio.

Cap convex, umbonate, 2.5 cm in diam., white, silky,
stipe white, silky, even, 4 cm long, 2 mm in diam., gills
pink, medium, narrowly adnexed.

ENTOLOMA ALCALINUM Murr.

North Amer. Flora 10:122. 1917

Pileus 3-5 cm, broad, convex, umbonate, gregarious or cespitose, grayish-brown, lacerate, margin not striate. Context white; taste alkaline.

Lamellae sinuate, salmon-colored, broad, rounded in front, subdistant, edges undulate.

Stipe 4 cm ^{long,} ~~7 mm~~ ^{thick,} ~~1 mm~~ white, apex pruinose, equal, solid or stuffed.

Spores 8-10 (12) x 7-8 (10) μ , subglobose to ovoid, 6-7-sided, often obscurely so, asymmetrical. Basidia 30-34 x 8-11 μ , 2-4-spored. Pleurocystidia and cheilocystidia none. Gill trama subparallel, hyphae 4-8 (12) μ broad. Pileus trama radial. Cuticle repent, with inconspicuous repent pilocystidia. Clamps and lactifers none.

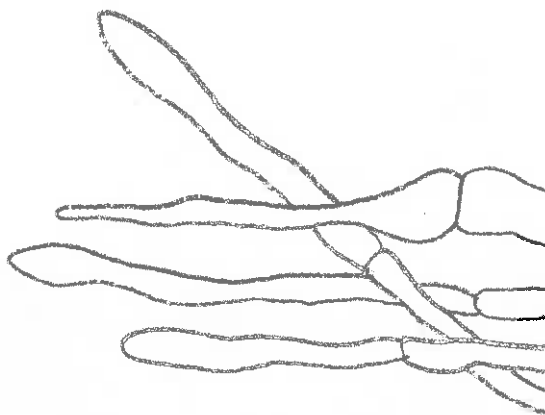
Habit, habitat, and distribution - On ^a lawn, Minnesota, September.

Material studied - MINNESOTA: Whetstone and Darrow 63, type, from Minneapolis, Sept. 3, 1914.

Observations - (see European *E. alkalinum*)

Entoloma alcalinum Murr.

Type



120

Pilo - x 1000



Entoloma alcalinum Murr. - Type

X 1700

ENTOLOMA ALUTACEUM Murr.

North Amer. Flora 10:114. 1917

Pileus 3-6 cm, broad, convex, cuspidate, pale-tan, ~~colored~~, glabrous, shining, margin entire to undulate or lobed. Context thin, concolorous; taste mild.

Lamellae sinuate, white to dirty-pink, rather broad, subdistant, edges entire.

Stipe 5-8 cm ^{long,} ^{thick} 4-8 mm, concolorous or paler, glabrous, shining, equal, curved, solid.

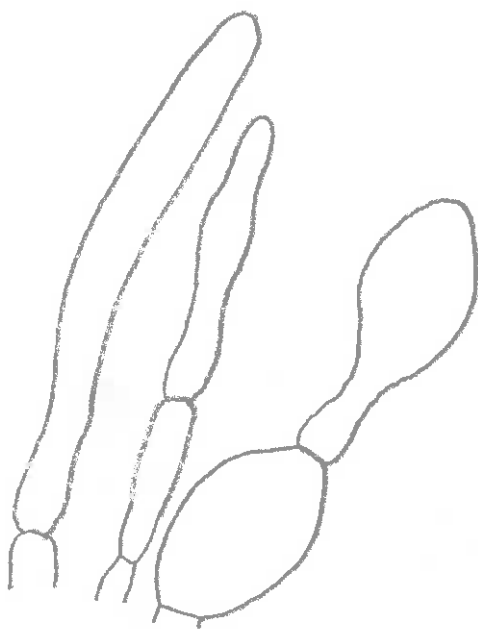
Spores 9-11 x 6.5-8 μ , 5-6-sided, at times indistinctly so, ~~asymmetrical~~. Basidia 34-40 x 9-12 μ , 2-4-spored. Pleurocystidia and cheilocystidia none. Gill trama subparallel, hyphae 4-7 μ broad. Pileus trama radial. Cuticle repent, with scattered, loosened, uplifted hyphae, the terminal elements at times cystidioid. Clamps and lactifers none.

Habit, habitat, and distribution - In wet moss, Connecticut, Maine, and New York, August.

Material Studied. - CONNECTICUT: Earle 1248, type, from Redding, Aug. 26, 1902.

Entoloma alutaceum Murr.

Type



121

Pilo - X 1000

LEPTONIA ANATINA (Lasch) Kummer

Der Führer in die Pilzkunde, p. 96. 1871

Agaricus anatinus Lasch, Linnaea 4:540. 1829.

Pileus 18-64 mm. broad, convex then expanded, often truncate- or obtusely-umbonate, sometimes with a central depression, sepia-horn or vandyke, often darker at the center and paler towards the margin, pallid-buff or gray-horn when dry, entirely minutely adpressed scaly except sometimes at center or extreme margin, these scales denser toward the center and sometimes arranged radially in the outer part, giving a rimose-striate appearance, not pellucid-striate except sometimes when very old and wet. Context . whitish in center of pileus and stipe, brownish under the cuticle, bluish or violaceous in the stipe cortex, then fading; odor none.

Lamellae adnate, usually ventricose, white, then whitish or pale pinkish, then deeper pinkish or slightly brownish pink, crowded, edges concolorous or paler, even or uneven.

Stipe 3-8 cm. x 2-5 mm., ultramarine-violaceous or -bluish, soon fading to steel-gray-violaceous or gray-brown with slight blue tinge, often finally concolorous with the pileus, and entirely, except near the base, without blue tinge, white silky-fibrillose striate at least at first and sometimes scattered floccose-fibrillose scaly, apex not or

slightly white pruinose, hollow and cartilaginous, base white tomentose, sometimes strongly so.

Spores 11-15.5 x 7.5-9 μ , 6-sided, at times obscurely 5-7-sided. Basidia 32-38 x 10-12 μ , 2-4-spored. Pleurocystidia none; cheilocystidia 35-48 x 6-16 μ , clavate, rarely cuneiform, at times constricted, not always conspicuous. Gill trama subparallel, hyphae 6-17 μ broad. Pileus trama of radially-disposed hyphae. Cuticle of repent hyphae, bearing more or less uplifted, fuscous, large pilocystidia, often in tufts (scales).

Observations - The description of the macroscopic characters above is from Orton (1960); that of microscopic characters is based on a study of a collection by R. W. G. Dennis, No. 95, July 21, 1951, southwest coast of the Isle of Rhum. Orton says the gill edges are fertile (as I found), and that cheilosysticia are fusiform or slightly lageinform, 30-50 x 8-12 μ .

LEPTONIA ANATIMA (Lasch) Kummer

Der Fuhrer in die Pilzkunde, p. 96. 1871

Agaricus anatinus Lasch, Linnaea 4:540. 1829.

Pileus 18-64 mm. broad, convex then expanded, often truncate- or obtusely-umbonate, sometimes with a central depression, sepia-horn or vandyke, often darker at the center and paler towards the margin, pallid-buff or gray-horn when dry, entirely minutely adpressed scaly except sometimes at center or extreme margin, these scales denser toward the center and sometimes arranged radially in the outer part, giving a rimose-striate appearance, not pellucid-striate except sometimes when very old and wet. Context whitish in center of pileus and stipe, brownish under the cuticle, bluish or violaceous in the stipe cortex, then fading; odor none.

Lamellae adnate, usually ventricose, white, then whitish or pale pinkish, then deeper pinkish or slightly brownish pink, crowded, edges concolorous or paler, even or uneven.

Stipe 3-8 cm. x 2-5 mm., ultramarine-violaceous or -bluish, soon fading to steel-gray-violaceous or gray-brown with slight blue tinge, often finally concolorous with the pileus, and entirely, except near the base, without blue tinge, white silky-fibrillose striate at least at first and sometimes scattered floccose-fibrillose scaly, apex not or

slightly white pruinose, hollow and cartilaginous, base white tomentose, sometimes strongly so.

Spores 11-15.5 x 7.5-9 μ , 6-sided, at times obscurely 5-7-sided. Basidia 32-38 x 10-12 μ , 2-4-spored. Pleurocystidia none; cheilocystidia 35-48 x 6-16 μ , clavate, rarely cuneiform, at times constricted, not always conspicuous. Gill trama subparallel, hyphae 6-17 μ broad. Pileus trama of radially-disposed hyphae. Cuticle of repent hyphae, bearing more or less uplifted, fuscous, large pilocystidia, often in tufts (scales).

Observations - The description of the macroscopic characters above is from Orton (1960); that of microscopic characters is based on a study of a collection by R. W. G. Dennis, No. 95, July 21, 1951, southwest coast of the Isle of Rhum. Orton says the gill edges are fertile (as I found), and that cheilosysticia are fusiform or slightly lagenⁿⁱiform, 30-50 x 8-12 μ .

LEPTONIA ANATINA (Lasch) Kummer

On loan from Edinburg, Scotland, Royal Botanic Garden Herb.; coll. P. D. Orton, No. 1605, Aug. 14, 1958, Broomfield Hill, Somerset.

Spores 10-13 x 7-8.5 μ , 5-7-sided, often obscurely 5-8-sided. Basidia 33-46 x 10-12 μ , (2)4spored. Pleurocystidia none; cheilocystidia fusoid or ventricose, 22-30 x 6-8 μ , few, standing among fertile basidia. Gill trama subparallel, hyphae 7-15 μ broad. Pileus trama radial (cellular in tangential sections). Cuticle of repent, brown hyphae, the terminal elements at times clavate, as pilocystidia. Clamp connections none.

LEPTONIA ANATINA (Lasch) Kummer

On loan from Edinburg, Scotland, Royal Botanic Garden
Herb.; coll. P. D. Orton, No. 1605, Aug. 14, 1958, Broomfield
Hill, Somerset.

Spores 10-13 x 7-8.5 μ , 5-7-sided, often obscurely
5-8-sided. Basidia 33-46 x 10-12 μ , (2)4spored. Pleuro-
cystidia none; cheilocystidia fusoid or ventricose, 22-30 x
6-8 μ , few, standing among fertile basidia. Gill trama
subparallel, hyphae 7-15 μ broad. Pileus trama radial
(cellular in tangential sections). Cuticle of repent,
brown hyphae, the terminal elements at times clavate, as
pilocystidia. Clamp connections none.

Leptomia anatina (Färsch) Kummer
Orton No. 1605



Ch - x 1000



Pilo - x 1000

LEPTONIA ANATINA (Lasch) Kummer

from Royal Botanic Garden, Edinburgh, coll. by
G. Hadley, No. 594c, Oct. 16-'62.

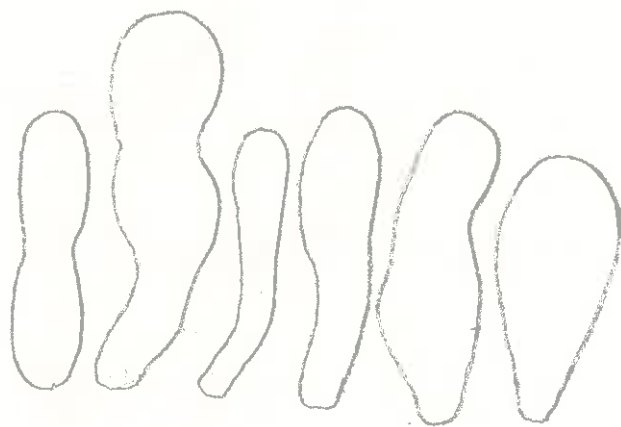
Spores 10-13 x 7-9 μ , 6-sided, some obscurely 5-7-sided.
Basidia 34-42 x 8-11 μ , (2) 4-spored. Pleurocystidia none;
cheilocystidia fusoid, rare, small, similar to Orton No. 1605,
gill-edges fertile. Gill trama subparallel, hyphae 6-13 μ
broad. Pileus trama radial. Cuticle of brown, repent hyphae,
and fuscous, clavate pilocystidia. Clamp connections none.

LEPTONIA ANATINA (Lasch) Kummer

from Royal Botanic Garden, Edinburgh, coll. by
G. Hadley, No. 594c, Oct. 16-'62.

Spores 10-13 x 7-9 μ , 6-sided, some obscurely 5-7-sided.
Basidia 34-42 x 8-11 μ , (2) 4-spored. Pleurocystidia none;
cheilocystidia fusoid, rare, small, similar to Orton No. 1605,
gill-edges fertile. Gill trama subparallel, hyphae 6-13 μ
broad. Pileus trama radial. Cuticle of brown, repent hyphae,
and fuscous, clavate pilocystidia. Clamp connections none.

Leptonia anatina (Fisch) Kummer
from Kew, Dennis No. 95.



Ch - x 1000

ENTOLOMA ANGUSTIFOLIUM Murr.

North Amer. Flora 10:118. 1917

Pileus 3 cm, broad, convex, subfuliginous, glabrous, moist, subrugulose, margin even, incurved.

Lamellae sinuate, whitish, narrow, crowded *or close.*

Stipe 7 cm, ^{long,} ^{thick,} 7 mm, pallid, glabrous, shining, sub-cylindric, slightly ventricose.

Spores 8-10 x 7-8 μ , subglobose to ellipsoid, 5-6-sided, at times obscurely 5-6-7-8-sided, asymmetrical. Basidia 33-38 x 8-10 μ , 2-4-spored. Pleurocystidia and cheilocystidia none. Gill trama subparallel, hyphae 3-6 μ broad. Pileus trama radial. Cuticle repent, with a few, scattered, more or less uplifted hyphae; no pilocystidia. Clamps and lactifers none.

Habit, habitat, and distribution - In humus, wet woods, Connecticut and New Jersey, August.

Material Studied, - CONNECTICUT: Earle, 1228, type, from Redding, Aug. 25, 1902.

Merrill describes the gills as crowded; they appear to be close.

LEPTONIA ANGUSTIFOLIA (Murr.)

Eccilia angustifolia Murr., N. A. Flora 10:81. 1917.

Pileus 1.5-2 cm/ broad, convex-umbilicate, not expanding, glabrous, uniformly tan-colored, pale-chestnut dried, margin striate. Context thin.

Lamellae short-decurrent, white to salmon-colored, narrow, subdistant, several times inserted, edges concolorous.

Stipe 4-5 cm/ long, reaching 2 mm/ thick, pale fuliginous, equal, glabrous, solid.

Spores 9-10 (12) x 7-8.5 μ , 5-6-sided, ~~symmetrical~~. Basidia 24-28 x 8-10 μ , 1-2-4-spored. Pleurocystidia and cheilocystidia none. Subhymenium not well-differentiated. Gill trama subparallel. Pileus trama radial. Cuticle repent, with an occasional fuscous pilocystidium. Clamp connections none. Lactifers few.

Habit, Habitat, and Distribution. - On soil, in moss, New York, August.

Material Studied. - NEW YORK: Earle 1832, ^{the type,} from West Park, Aug. 9, 1903.

Observations. - ^{description of the} The microscopic characters ^{given above is} are based on a study of the type.

^{It has some features in common with}
Eutoloma angustifolium, but differs in its umbilicate, tan pileus, short-decurrent gills, and slender stipe.

Septoria angustifolia (Murr.)
Type



(6)

Article (pilocyphidia) - $\times 1000$

12792 LEPTONIA APPALACHIANENSIS sp. nov.

(=22358, 24382)

Pileus 18-25 mm broad, convex, slightly depressed, squamulose, more densely so on disk, gray-brown (not matched), disk darker, hygrophanous, margin striate. Context rather thin, pallid; odor and taste mild.

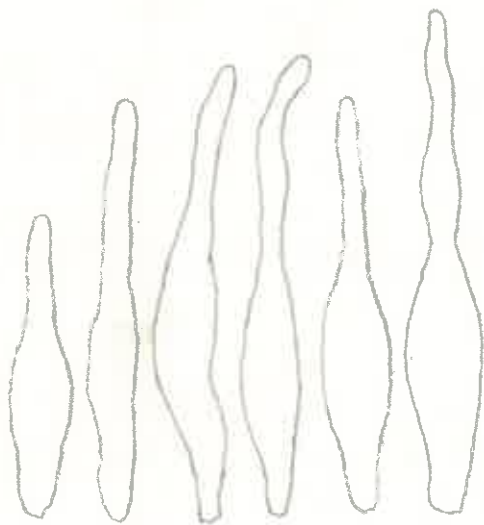
Lamellae adnexed, subdistant, medium broad, flesh-color, edges rough to fimbriate and concolorous.

Stipe 2-3 cm x 2-3 mm, dingy, grayish-brown, apex pruinose, elsewhere glabrous, more or less curved, easily splitting.

Spores 8-10 x 5.5-8 μ , 5-sided. Basidia 25-28 x 7-8 μ , 2-4-spored. Pleurocystidia none; cheilocystidia 40-66 x 6-10 μ , lageniform to slender fusiform. Subhymenium of small cells. Gill trama subparallel, hyphae 5-10 μ broad. Pileus trama radial. Cuticle appressed, with tufts of free ends (forming scales). Clamp connections and lactifers none.

Leptonia appalachianensis sp. nov.

No. 12992



Ch - x 1000

22358

LEPTONIA APPALACHIANENSIS sp. nov.

Pileus 3-6 cm broad, hemispheric, expanding, umbilicate, grayish-brown (near "wood brown"), fibrillose, scaly on disk from upturned fibril-ends, subhygrophanous, margin wavy, often plicate. Context thin, pallid; odor and taste oily-fishy, unpleasant.

Lamellae adnate, then adnexed, whitish, finally "seashell pink," close or nearly subdistant, medium broad, edges concolorous, fimbriate.

Stipe 4-6 cm x 3-5 mm, pallid grayish to dingy, apex mealy, elsewhere pruinose to silky, base white-mycelioid, often compressed, easily splitting, hollow, equal.

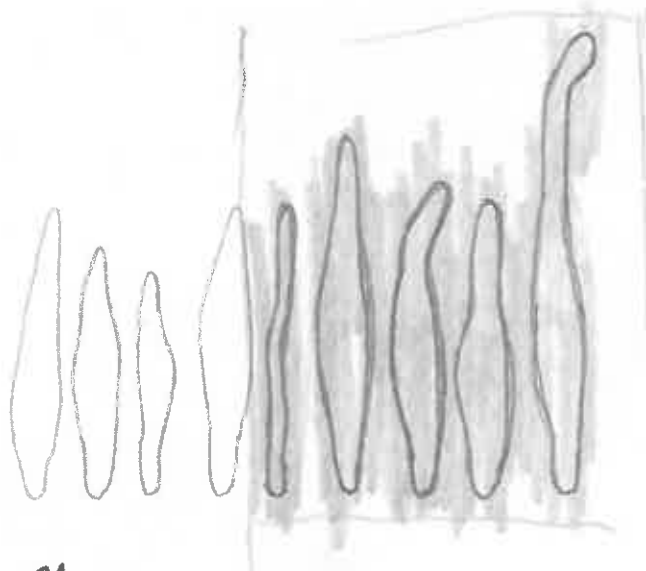
Spores 8-11 x (5.5) 6-7 μ , symmetrical, 5-6-angled, apiculate, in mass: "cinnamon". Basidia 30-42 x 7.5-9 μ , 2- and 4-spored, rarely 1-spored. Pleurocystidia none; cheilocystidia ventricose to subcylindric or subfusoid, 30-~~42~~⁶⁶ x 7-10 μ , more or less clustered. Gill-trama of subparallel hyphae, 4-8 μ broad. Pileus trama of radial hyphae (seen as pseudoparenchyma in tangential sections). Cuticle of repent hyphae, at intervals with colorless pyramidal tufts of pilocystidia (scales).

Habitat and Distribution - In deciduous woods, North Carolina, July.

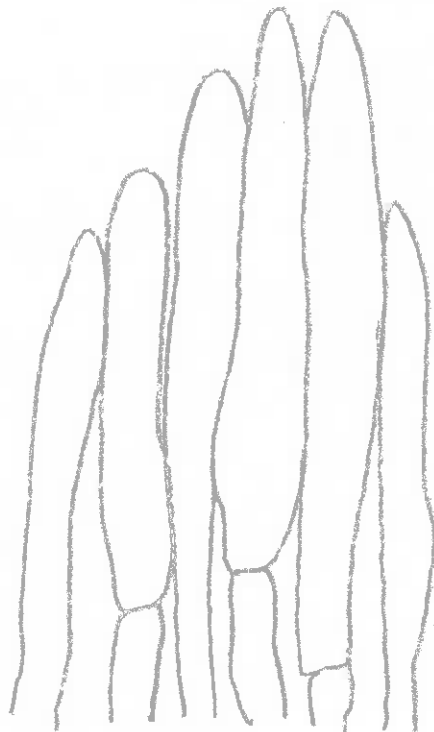
Near griseorubella which has pleurocystidia.

Leptomia No. 22358
appalachianensis sp. nov.

Type



Ch. - $\times 1000$



Cuticle - scale - $\times 1000$

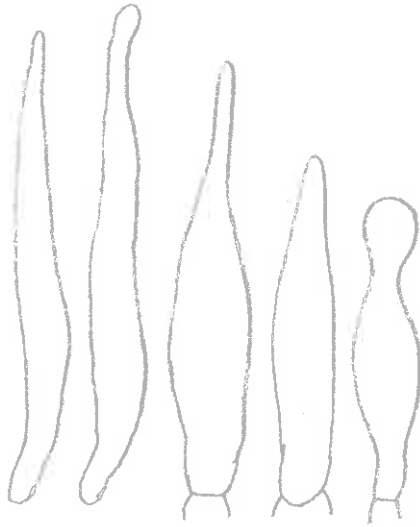
Pileus 2-3 cm broad, hemispheric-convex, not expanding, umbilicate, gray-brown (not matched), hygrophanous, scaly on the disk, striate when wet. Context thin, pallid; odor mild, taste slightly fungoid.

Lamellae adnexed, whitish then "pinkish buff", broad, medium close, edges concolorous, fimbriate.

Stipe 3-6 cm x 2-4 mm, pale brown above, darker below, apex pruinose, scattered-fibrillose below, equal, hollow, splitting longitudinally.

Spores 8-10 (11) x (5.5) 6-7.5 (8) μ , 6- (more rarely 5-) sided. Basidia 28-34 x 7-9 μ , 2- and 4-spored. Pleurocystidia none; cheilocystidia 40-65 x 6-10 μ , clustered (appearing more or less agglutinated), subulate or more or less clavate, appendiculate, tapering, or rarely capitate. Subhymenium a narrow zone of small, flattened cells. Gill trama parallel. Pileus trama of radial hyphae (appearance as pseudoparenchyma in tangential sections). Clamp connections none. Lactifers none. Cuticle of repent hyphae.

Leptonia No. 24382
appalachianensis



~~H.~~ Ch. - x 1000

LEPTONIA ASPRELLA (Fr.) Kummer

Der Führer in die Pilzk., p. 96. 1871

Agaricus (Eccilia) asprellus Fr., Syst. Muc. 1: 208. 1821.

(Fries' description)

Pileus 0.5-1.0 unc. broad, fragile, fibrillose-squamose, livid-gray, umbilicate, disc fuliginous-scaly.

Lamellae adnate, broad, distinct, integerrimae.

Stipe 1.5-2 unc. long, 1 line thick, subfragile, gray, base white-tomentose, fistulose, dilutioribus.

1. In his general characters of Trib. Eccilia, Fries says that the pileus is not blue but is livid, fuscous, etc., glabrous to minutely scaly, the lamellae subdistant; flesh membranous, without odor and taste. Omphalia-like.

2. K. & R. give the following: Pileus 1-3 cm without traces of blue or violet, but deep dusky becoming mechulous, very striate. Lamellae not at first blue nor violet, but tinted gray. Stipe 1-2.5 mm thick, deep gray-blue steel to gray-violet. Spores 10-12 x 6.5-7.5 μ . "not certainly distinct from lazulinus (Lange Pl. 77, D, D.).

3. Bresadola: supplementary or different characters: Pileus hygrophanous, from fuliginous to livid-gray; lamellae from white to gray then flesh-colored; stipe glabrous, typically livid but varying fuscous, greenish, subcaeruleus; spores 10-12 x 7-9 μ , 6-7-angled. Basidia 25-30 x 10 μ ; cystidia on edges clavate-ventricose, brownish, 45-60 x 8-15 μ .

4. Orton thinks various descriptions probably include several species.

5. Lange: Pileus bistre; gills grayish pale; stipe steel-blue or bluish glaucous (in other finds subfuscous). Spores 11.5 x 7.5 μ . Has some traits in common with L. sarcita Fr. ss. K. & M.

LEPTONIA ASPRELLA Fr.

From Mus. Botan. Stockholm, Herb. Mycolog. Lars Romell, No.9602.
Coll. July 17, 1892.

Spores 9-11 x 6-7.5 μ , 5-sided, at times more or less obscurely 4-5-6-sided. Basidia 30-38 x 8-10 μ , 2-4-spored. Pleurocystidia and cheilocystidia none. Gill trama subparallel, hyphae 6-12 μ broad. Pileus trama radial (appearing cellular in tangential sections). Cuticle repent, with scales composed of clusters of clavate, fuscous pilocystidia. Clamps none; lactifers present in the pileus trama.

L. asprella, as stated by Dennis, Orton, and Hora (1960: 173), the descriptions by Fries and other authors, probably include several different species. If L. asprella SS. Lange be followed, then we have seen no specimens in the Southeast which belong to it.

LEPTONIA ASPRELLA Fr.

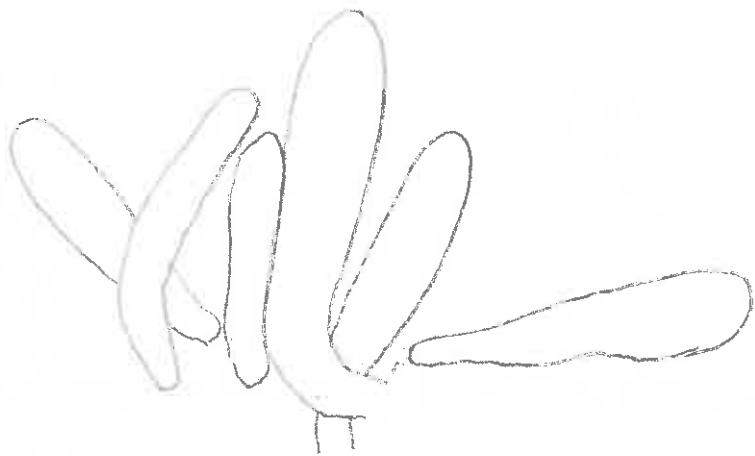
From Mus. Botan. Stockholm, Herb. Mycolog. Lars Romell, No. 9602.
Coll. July 17, 1892.

Spores 9-11 x 6-7.5 μ , 5-sided, at times more or less obscurely 4-5-6-sided. Basidia 30-38 x 8-10 μ , 2-4-spored. Pleurocystidia and cheilocystidia none. Gill trama subparallel, hyphae 6-12 μ broad. Pileus trama radial (appearing cellular in tangential sections). Cuticle repent, with scales composed of clusters of clavate, fuscous pilocystidia. Clamps none; lactifers present in the pileus trama.

L. asprella, as stated by Dennis, Orton, and Hora (1960: 173), the descriptions by Fries and other authors, probably include several different species. If L. asprella SS. Lange be followed, then we have seen no specimens in the Southeast which belong to it.

Leptonia asprella Fr.

from Lars Romell Herb., No. 9602, Stockholm.



Pleuroptidia - x 1000

LEPTONIA ASPRELLA (Fr.) Kummer

(Bas-11854; Tenn.-26246)

Notes by Bas

Cap 15-25 mm, hygrophanous, very dark sepia-brown and striate when moist nearly to center, drying much paler with slight purplish tinge; center flat or slightly depressed and then minutely scaly. Smell absent.

Gills broadly adnate, rather distant, rather thick, up to 5 mm wide, ventricose, transversely venose in places, dingy grayish pink when young (somewhat gray-blue near margin of cap); edge dark brown, becoming paler.

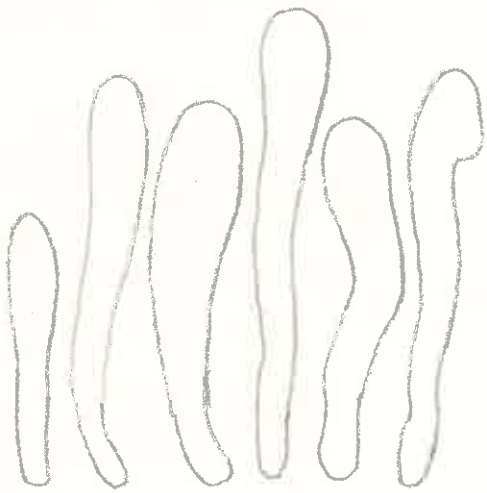
Stem 30-40 x 2-3 mm, innately fibrillose, glabrous and smooth, apex slightly fibrillose, purple-blue to steel-blue when young, becoming more grayish with age, bluish-gray to gray-brown near base, white tomentose at base.

Notes by Hesler

Spores 9-12 x 6.5-7.5 μ , 6-sided, at times indistinctly so. Basidia 32-38 x 8-10 μ , 2-4-spored. Pleurocystidia none; cheilocystidia 36-63 x 7-11 μ , clavate, often fuscous or pale-fuscous, at times colorless or nearly so. Gill trama subparallel, hyphae 4-10 μ broad. Pileus trama radial. Cuticle of repent hyphae with tufts of fuscous, clavate, pilocystidia. Clamp connections none.

This seems to agree with the colors of L. asprella except for the dark-brown gill-edges, which are clearly seen under a hand-lens.

Leptonia asprella
Bas - 11854



Ch - x 1000

AGARICUS (LEPTONIA) ASSULARUM B. & C.

Type, from Kew Gardens, No. 2842.

Spores 9-13 x 7-8.5 μ , 5-6-sided, at times indistinctly so, rarely nodulose. Basidia (unfit for study). Pleurocystidia and cheilocystidia none. Gill trama subparallel. Pileus trama radial. Cuticle repent, the surface hyphae colorless, 4-6 μ broad. ~~Slamp~~^{connections} and lactifers none.

Nolanea

* ~~ENTOLOMA~~ ^a ATRIBRUNNEUM (Murr.) *comb. nov.*

North Amer. Flora 10:118. 1917

Entoloma atribrunneum Murr., ~~North Amer.~~ ^{North Amer.} Flora 10:118. 1917.

Pileus 3 cm. broad, subcampanulate, distinctly umbonate, dark-brown, floccose-tomentose, solitary, margin entire.

Lamellae deeply sinuate, white to pale pink, broad, crowded, edges entire.

Stipe 5 cm. x 3-4 mm., purplish-brown, tapering upward from a slightly enlarged base, floccose-scaly, hollow.

Spores 8-11 (14) x 6.5-8 (9) μ , subglobose to ellipsoid, 5-6-sided, ~~asymmetrical~~, rose-colored. Basidia 30-34 x 8-9 μ , 4-spored. Pleurocystidia and cheilocystidia none. Gill trama subparallel, hyphae 4-8 μ broad. Pileus trama radial. Cuticle repent, with scattered tufts of fuscous pilocystidia. Clamp ^{connections} and lactifers none.

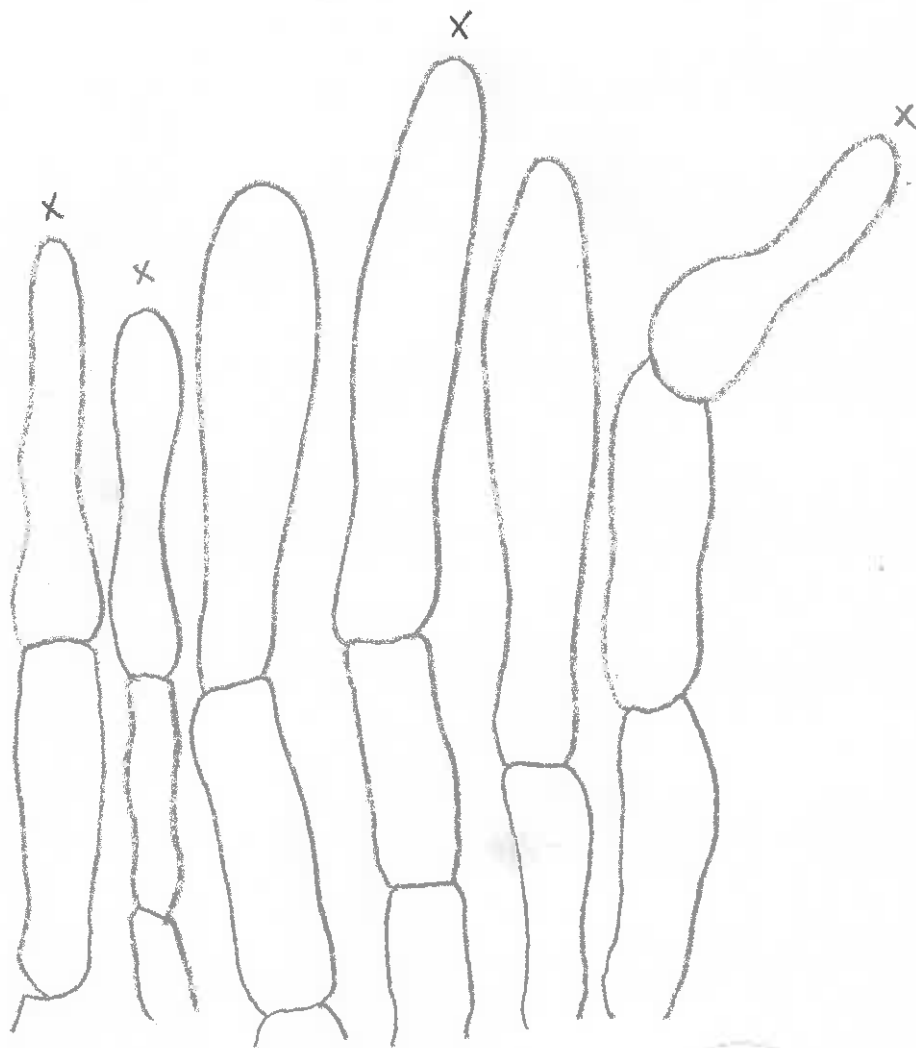
Habit, habitat, and distribution. - On soil, in woods, New York, July.

Material studied. - NEW YORK: Earle 192, type, New York City, July 6, 1902.

Observations. - Although Murrill describes it as fleshy, the thickness of the pileus and the rather slender stipe suggest that this would be better in Nolanea.

Entoloma atribrunneum Murr.

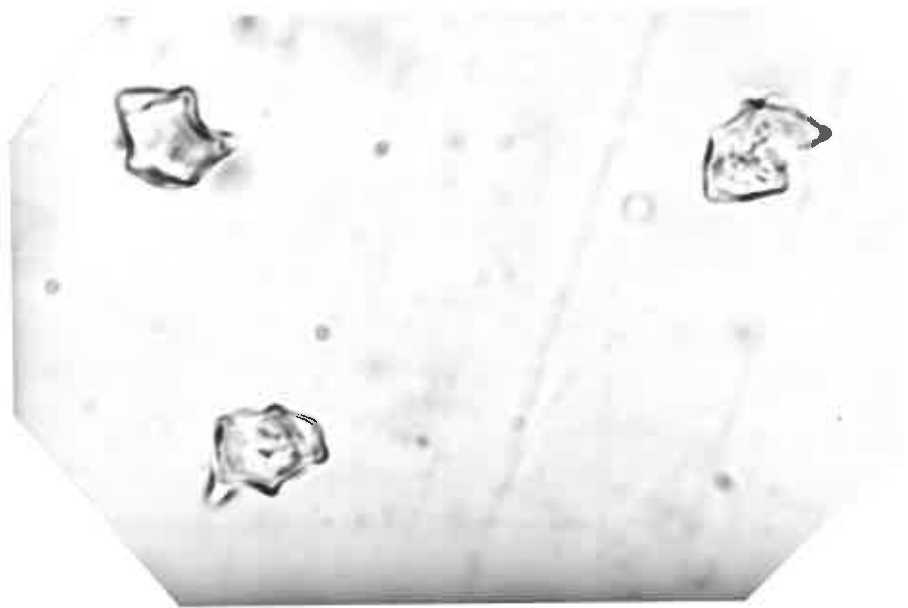
Zepe



Pilo - X 1000

fuscous.

73



Entoloma atribrunneum Murr. - Type

x 1700

NOLANEA ATROCYANEA Clements
Bot. Survey ^{Nebraska} ~~Nebr.~~ 4:21. 1896
A

Pileus 1-3 mm. broad, campanulate, papillate, blackish-blue, glabrous or minutely verrucose, margin striate, lacerate. Context membranous, bluish.

Lamellae ochraceous, narrow, subdistant.

Stipe 1 cm. x 0.5-1 mm., light blue or glaucous, glabrous, equal, cartilaginous.

Spores 7-9 x 5-5.5 (6) μ , 5-sided, at times obscurely 5-6-sided, ~~symmetrical~~. Basidia 20-23 x 5-5.5 (6) μ . Pleurocystidia and cheilocystidia none. Gill trama subparallel. Pileus trama of radially arranged hyphae (which resemble pseudoparenchyma in tangential sections). Cuticle of repent hyphae; no trichodermial hyphae and no pilocystidia. ~~No lactifers~~ ^{one}.

Habit, habitat, and distribution. - On soil in damp woods, Nebraska.

Material studied. - NEBRASKA: Pound and Clement 4266, the type, from Bellevue, July 4.

Observations. - The description of the microscopic characters above is drawn from the type, which was obtained on loan for study through the courtesy of Dr. W. W. Ray, Chairman, Dept. of Botany, The University of Nebraska, Lincoln, Nebr.

The type consists of one small carpophore. The pileus, gills, and stipe are dark blue. The blue pigment is slightly solvent in 2% KOH. The pileus is very thin and good sections ^{were} difficult to prepare.

RHODOPHYLLUS (LEPTONIA) ATROMARGINATUS Romagn.-Favre

From a fragment of the type, coll. & det. J. Favre, Doubs, Sept.
2, 1935.

Spores 11-15 x 8-9 μ , 5-6-sided, at times obscurely
6-7-8-9-sided, symmetrical.

(In the packet sent me by Romagnesi, I found a very minute
fragment, much too small and fragmentary to section; however,
some spores were found. All material was used up in study.)

LEPTONIA ATROMARGINATA (Romagn. & Favre) Konrad & Maubl.

from Royal Botanic Garden, Edinburgh, coll. P. D. Orton, No. 1606, Aug. 14, 1958, Broomfield Hill, Somerset.

Spores 11-14 (16) x 8-9 μ , 6-7-sided. Basidia 27-34 x 8-10 μ , 4-spored. Pleurocystidia none; cheilocystidia 28-45 x 6-11 μ , clavate, pale fuscous, often indistinct and difficult to distinguish. Gill trama subparallel, 5-9 (12) μ broad. Pileus trama radial. Cuticle of ~~b~~rown, repent hyphae, with scattered tufts of brown, clavate pilocystidia, 40-70 x 7-11 μ . Clamp connections none.

Gill edges black in some specimens.

LEPTONIA ATROMARGINATA (Romagn. & Pavre) Konrad & Maubl.

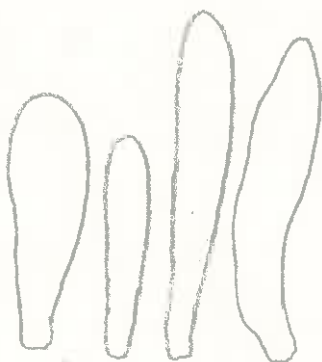
from Royal Botanic Garden, Edinburgh, coll. P. D. Orton, No. 1606,
Aug. 14, 1958, Broomfield Hill, Somerset.

Spores 11-14 (16) x 8-9 μ , 6-7-sided. Basidia 27-34 x 8-10 μ , 4-spored. Pleurocystidia none; cheilocystidia 28-45 x 6-11 μ , clavate, pale fuscous, often indistinct and difficult to distinguish. Gill trama subparallel, 5-9 (12) μ broad. Pileus trama radial. Cuticle of Brown, repent hyphae, with scattered tufts of brown, clavate pilocystidia, 40-70 x 7-11 μ . Clamp connections none.

Gill edges black in some specimens.

Leptomia atromarginata (R. & F.) K. & M.

Orton 1606



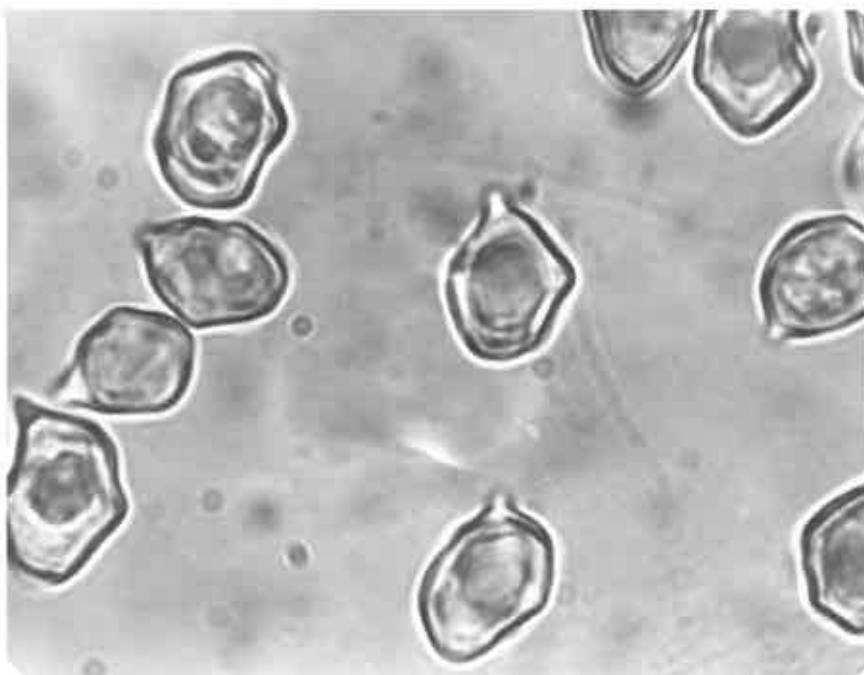
Ch - x 1000

Leptonia atrosquamosa Murr.

Type



Partials - x 1000



Leptonia atosquamosa (Murr.) Murr. - Type

X 2000

Leptonia No. 25793

aurantiobrunnea sp. nov.

Type



Ch - x 1000



Pilo - x 1000

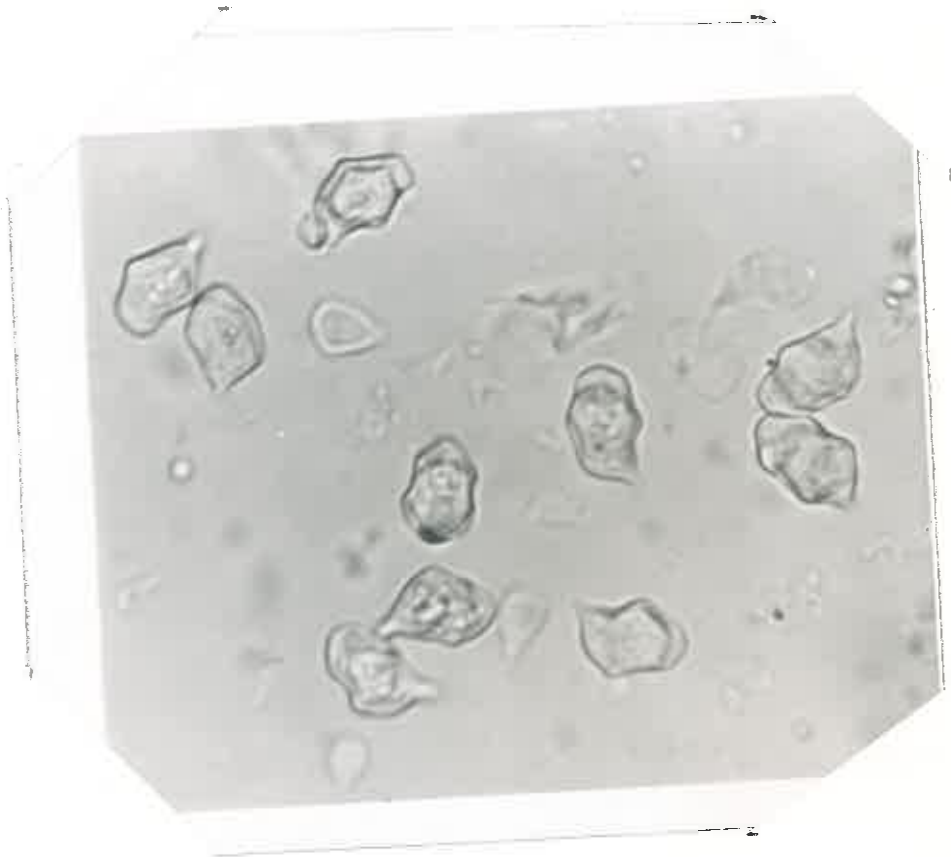
(fuscous in color)

Leptomia australis Murr.
Type



(8)

Cetivale - x 1000
(a hispid scale)



Leptonia australis Murr.

x 1700

Photo By T.H. Campbell

ENTOLOMA AVELLANEUM Murr.

North Amer. Flora 10:122. 1917

Pileus 3-4 cm, broad, convex to nearly plane, not umbonate, uniformly avellaneous, dry, glabrous, margin undulate or slightly lobed, not striate.

Lamellae sinuate, white to salmon-colored, rather broad, not crowded, edges somewhat uneven.

Stipe 5-6 cm, ^{lower,} ^{thick} 3-6 mm, white, nearly glabrous above, densely whitish-tomentose below, base white-mycelioid, tapering upward, hollow.

Spores 7-8 x 4.5-5.5 μ , moderately distinctly 5-sided, ~~or~~ ^{or} more often the sides and angles not distinct. Basidia 26-35 x 6-8 μ , 2-4-spored. Pleurocystidia and cheilocystidia none. Gill trama subparallel, the cells relatively short but broad (50-100 x 7-14 μ), the walls irregularly wavy. Pileus trama radial. Cuticle repent, some hyphae with loose free-ends; no pilocystidia. Clamps and lactifers none.

Habit, habitat, and distribution. - On much decayed conifer log, New York, October.

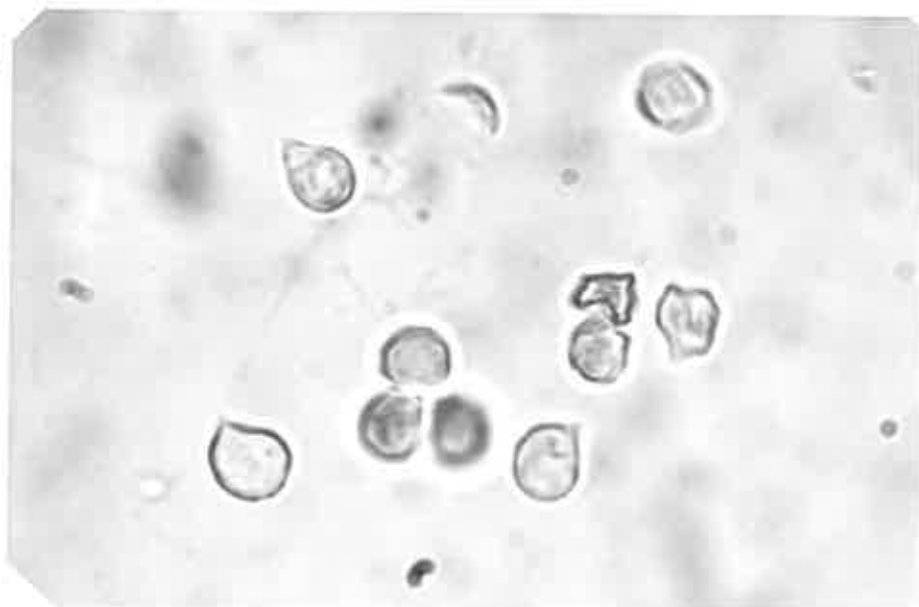
Material Studied. - NEW YORK: Murrill 495, type, from Lake Placid, Adirondack Mts., Oct. 3-14, 1912.



Entoloma avellaneum Murr. - Type

X 1500

See next page



Entoloma avellaneum Murr. - Type

x 1700

LEPTONIA AVELLANEA (Murr.) comb. nov.

Claudopus avellaneus Murr., North Amer. Flora 10:79. 1917.

Pileus 1 cm broad, convex, depressed behind, pale-avellaneous, finely tomentose, margin inflexed. Context thin.

Lamellae adnate, white to salmon-colored, broad, distant, edges entire and concolorous.

Stipe 5 mm x 1-2 mm, eccentric, grayish, densely tomentose, much enlarged above.

Spores (8)9-12 x 5.5-7 μ , 5-6-sided. Basidia 28-36 x 9-11 μ , 2-4-spored. Pleurocystidia none; cheilocystidia 30-38 x 4-6(10) μ , cylindric, rarely clavate-enlarged above, not abundant. Gill trama of undulating subparallel hyphae. Pileus trama radial, appearing as pseudoparenchyma in tangential sections. Cuticle repent, with numerous hyphae forming a turf, the terminal elements of the hyphae as clavate pilocystidia, 34-52 x 6-10 μ . Clamp connections and lactifers none.

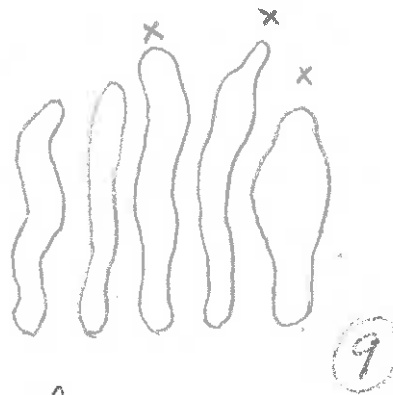
Habit, Habitat, and Distribution - On dead wood, Oregon, November.

Material Studied - OREGON: Murrill 779, the type, from Glen Brook, Nov. 7, 1911.

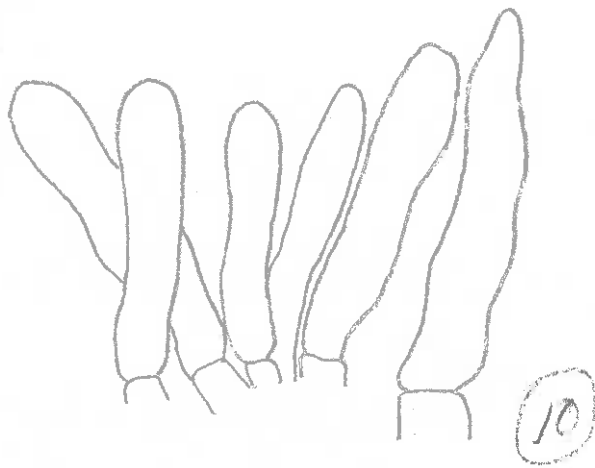
Observations - The description of the microscopic characters above is based on a study of the type; and of the macroscopic characters from Murrill (1917). The pileus structure is like that of other centrally-stipitate Leptonias, and thus we have removed it from Claudopus to Leptonia.

Leptonia (Claudopus) arellanea (Murr.)

Type



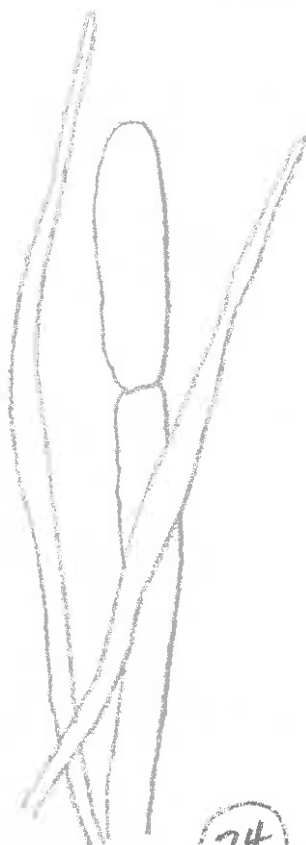
Ch - $\times 1000$



Pilocyptidia - $\times 1000$

Nolanea avellanea Murr.

Type



74

Epicuticular hyphae - x 1000

RHODOPHYLLUS AVELLANEOSQUAMOSUS sp. nov.

Illustrations:

Pileus 3-5 cm broad, convex, expanding plane, at times umbonate, umbilicate, hygrophanous, "vinaceous buff," scales "avellaneous" to "wood brown," radiately fibrillose-subrimose, fragile, splitting, margin even. Context thin, fragile, white; odor mild, taste acidulous.

Lamellae emarginate to adnexed, white then "pale cinnamon pink," close, medium broad, edges concolorous.

Stipe 4-8 cm long, 2-3.5 mm thick, dingy pallid-brown, strict, cartilaginous, slightly tapering upward, apex white mealy, base white-mycelioid, elsewhere glabrous, tubular.

Spores 9-12 x (6)7-8 μ , 6-sided. Basidia 29-36 x 9-10 μ , 4-spored. Pleurocystidia none; cheilocystidia 38-93 x 6-11 μ , ventricose, cylindric or obclavate, at times onceseptate, the upper portion usually tapering, scattered over the edges (absent in many sections). Gill trama parallel or subparallel, hyphae 6-15 μ broad. Subhymenium of parallel, slender (2-5 μ), non-gelatinous hyphae. Pileus trama cellular in tangential sections, hyphae radially parallel or subparallel. Cuticle not sharply differentiated, the surface bearing erect, colorless hyphae, 4-11 μ broad, singly or more often in clusters. Clamp connections none. Caulocystidia 24-65 x 4-6 μ , clavate to cylindric, colorless, in irregular tufts.

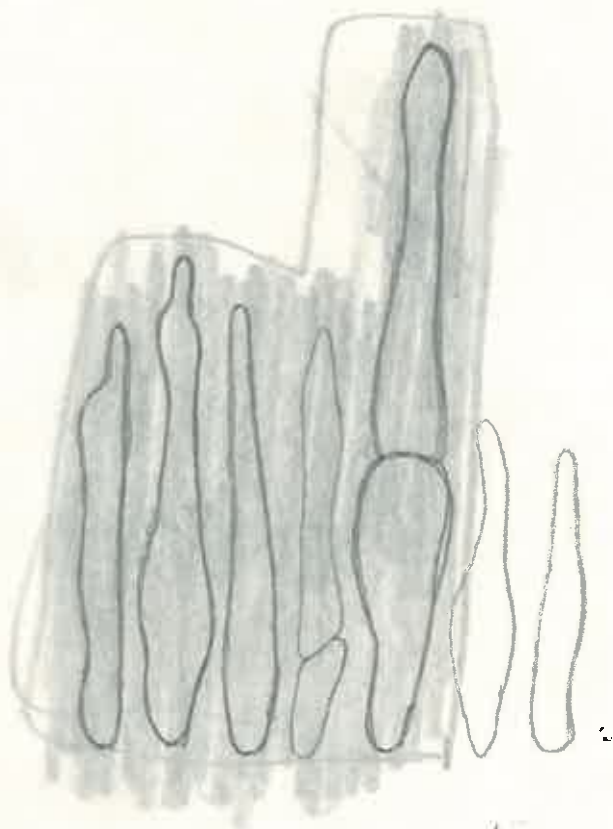
HABIT, HABITAT, AND DISTRIBUTION - On soil, in pine woods, Tennessee, June.

MATERIAL STUDIED - TENNESSEE: Hesler 25575, type, from Metcalf Bottoms, GSMNP, June 29, 1963.

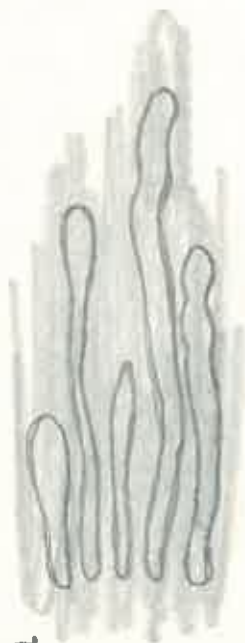
OBSERVATIONS - The avellaneous to wood brown scales set on a vinaceous buff pileus, and the tapering cheilocystidia constitute the characteristics of this species. It is somewhat suggestive of Leptonia acericola (Murr.) Murr., in which the lamellae are adnate, the stipe bright-steel-blue, and both pleurocystidia and cheilocystidia are present.

Leptonia 25575
arellaneosquamosa sp. nov.

Type



Ch - x 1000



Caulo - x 1000

= dysthales

LEPTONIA BABINGTONII (Blox.) Orton

from Royal Botanic Garden, Edinburgh, coll. P. D. Orton, No. 1608, Waterpits Wood, Somerset, Oct. 29, 1958.

Spores 12-15 x 7.5-9.5 μ , 8-10-sided, often obscurely so and nodulose. Basidia 36-45 x 10-12 μ , (2) 4-spored. Pleurocystidia none; cheilocystidia 35-46 x 10-13 μ , clavate, not always conspicuous. Pileus trama radial. Cuticle of several layers of brown, repent hyphae, bearing numerous, brownish, septate, constricted hyphae, many of which are incrustated (much as in certain species of Crepidotus). Clamp connections none.

Orton (1960:103, Supplement) gives Nolanea dysthales (Pk.) Murr. as a synonym. In the 4 collections of L. babingtonii from Edinburgh, the carpophores are very small, the caps (perhaps) 5-10 mm, the stipes (perhaps) 1-2 mm. The upper limit of spore-size is less than in Peck's type of N. dysthales, and in Peck's type I found no incrustated hyphae on the pileus.

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Labingtonii (Blox.) Sacc.

NOLANEA ~~DYSTHALES~~ (Pk.) Murr.

(Notes by Bas)

Cap 6-18 mm. across, rounded conical at first, seldom hemispherical or parabolic, then expanding with margin more or less recurved, mostly with broad low umbo, hygrophanous, very dark brown (Seguy 116) but margin much paler brown (Seguy 131 or 133) when moist, and dark brown, striate, brownish isabella (Seguy 133) with slightly darker centre when dry, minutely woolly brown tomentose, with fugaceous, appressed, silvery hairs when very young. Context very thin; odor and taste not distinctive.

Lamellae adnate, 11-16 (with 1-3 lamellulae between each pair), distant, becoming very ventricose, ascending from cap-margin to stalk, with serrate-crenate edge, dark grey-brown at first, then paler, ochraceous grey-brown with pinkish tinge, greyish ochraceous near edge.

Stipe 16-48 cm. x 0.3-2 mm., equal, or slightly thickened near the often somewhat bulbous base, pale brown, silvery-fibrillous with minute pale brown wooly flocks when dry, dark and unicoloured however when moist; base often with hirsute pale brown hairs.

Notes by Bas

Spores 13-18 x 7-8 μ , 7-8-sided. Basidia 38-48 x 11-13 μ , 2-4-spored. Pleurocystidia none; cheilocystidia clustered, cylindric, clavate, or vesiculose, 37-62 x 12-20 μ , colorless or pale fuscous. Gill trama subparallel. Pileus trama repent, the scales composed of tufts of fuscous, more or less clavate pileocystidia. Clamps and lactifers none.

balingtonii
Agaricus (Entoloma) dysthales Pk.

N. Y. State Mus. Ann. Rept. 32:28. 1879.

TYPE

Catskill Mts., July, Peck.

Spores 13-19 x 7-8 μ , 7-9-sided, more or less nodulose. Pleurocystidia none; cheilocystidia 40-61 x 10-22 μ , clavate to ventricose, at times collapsed. Pilocystidia brownish, cylindrical to clavate, 72-96 x 25-32 μ . Clamp connections none. Lactifers few.

Humboldt treats Leptonia dysthales, see Bull. Soc. Myc. Fr. 42:75-80. 1926.



Nolanea dysochales (Pk.) Murr. - Type
buxingtonii



Nolinaea dysphales (K.) Murr. — Type
babingtonii



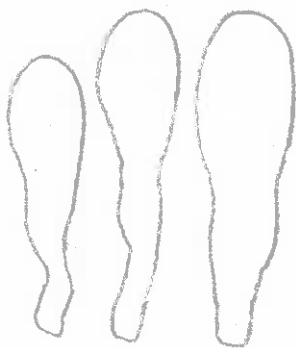
Nolea dyothales (~~Haw~~^{PK}) Murr. - Type
babingtonii
X 2300



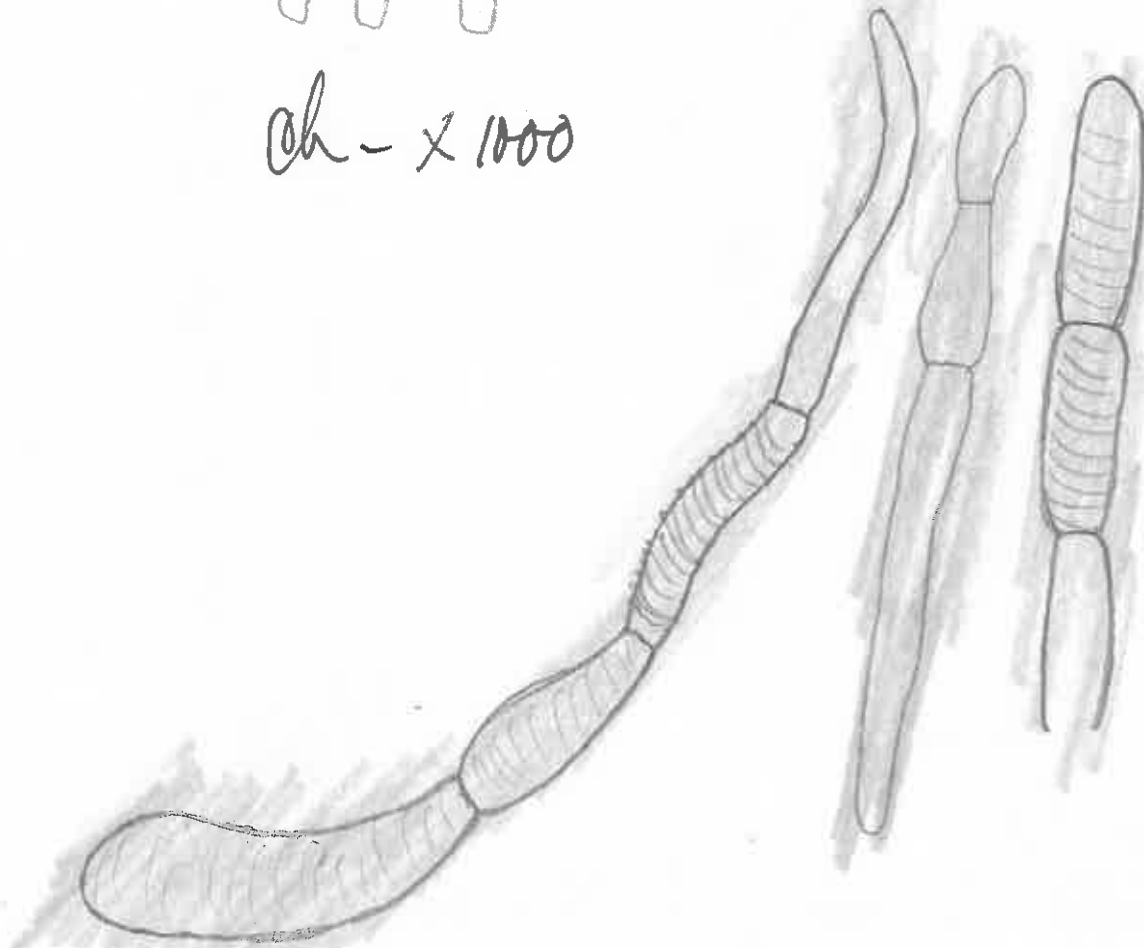
Nolea dipsthalis (Pk.) Murr. - Type
babingtonii

Leptonea Babingtonii (Blox.) Orton

Orton No. 1608



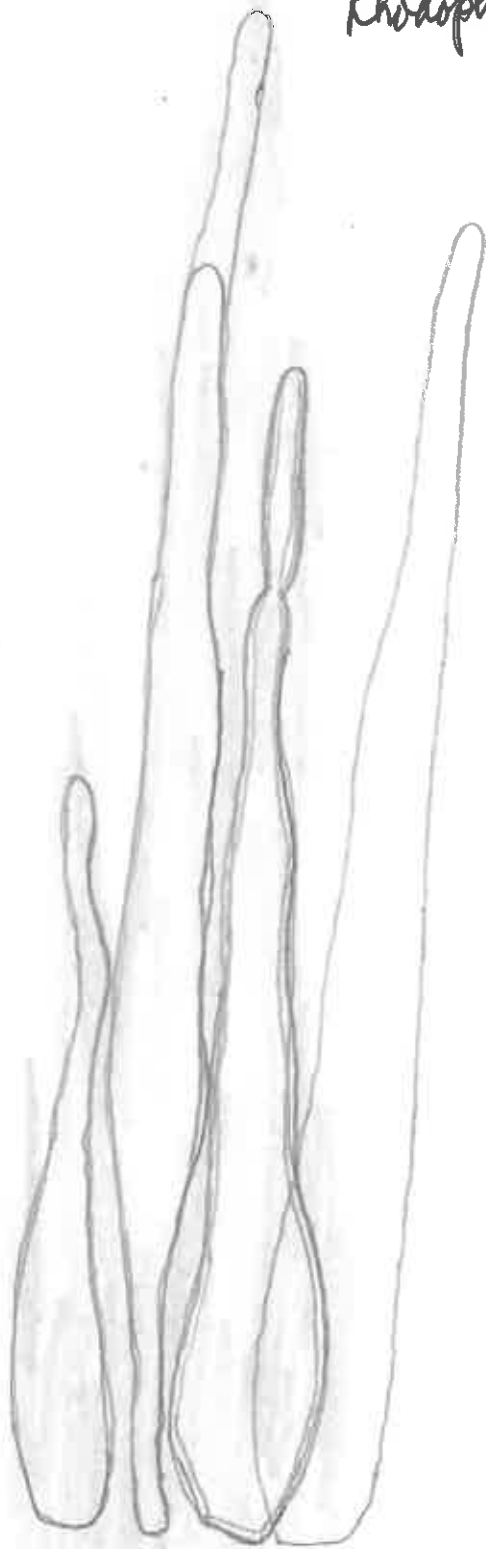
Ch - x 1000



Epicuticular hyphae - x 1000

Rhodophyllus babinptonii (Blox.) Guél.

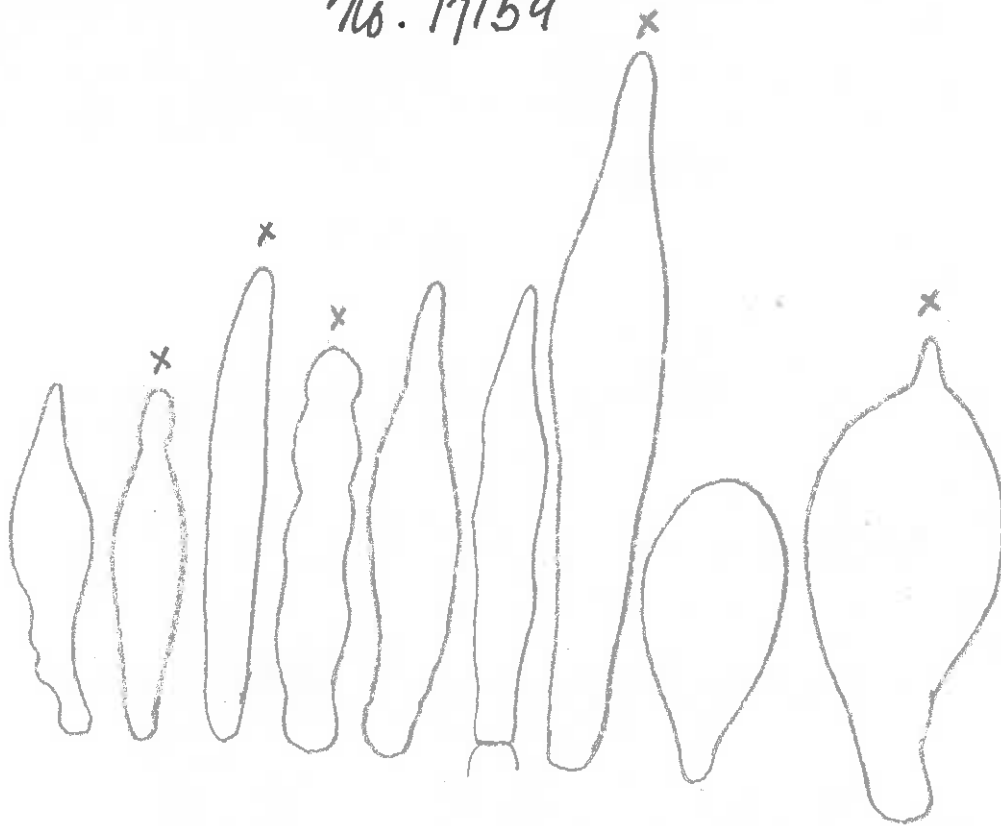
Tenn. - 12315



Caule - x 1000

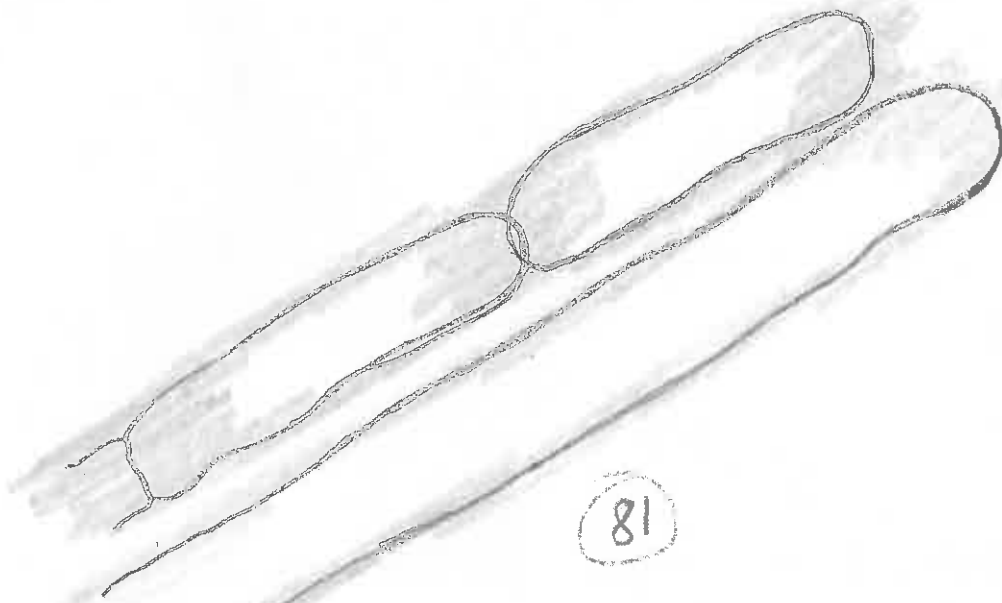
^{Babington}
Nolanea dipthales (Pk.) Murr.

No. 17159



Ch - x 1000

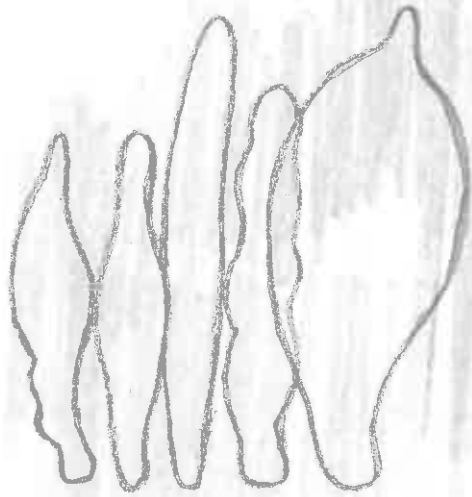
80



81

Hyphae from scale - x 1000

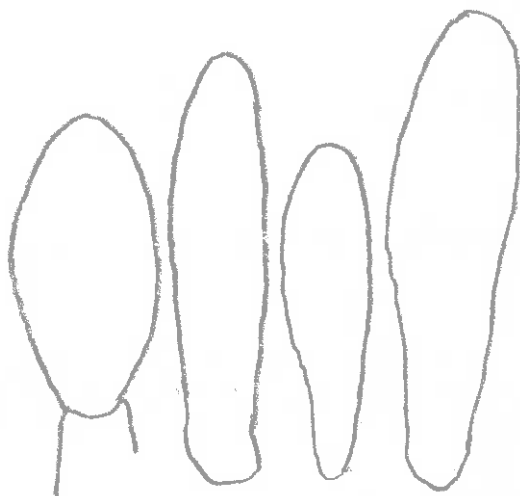
17159



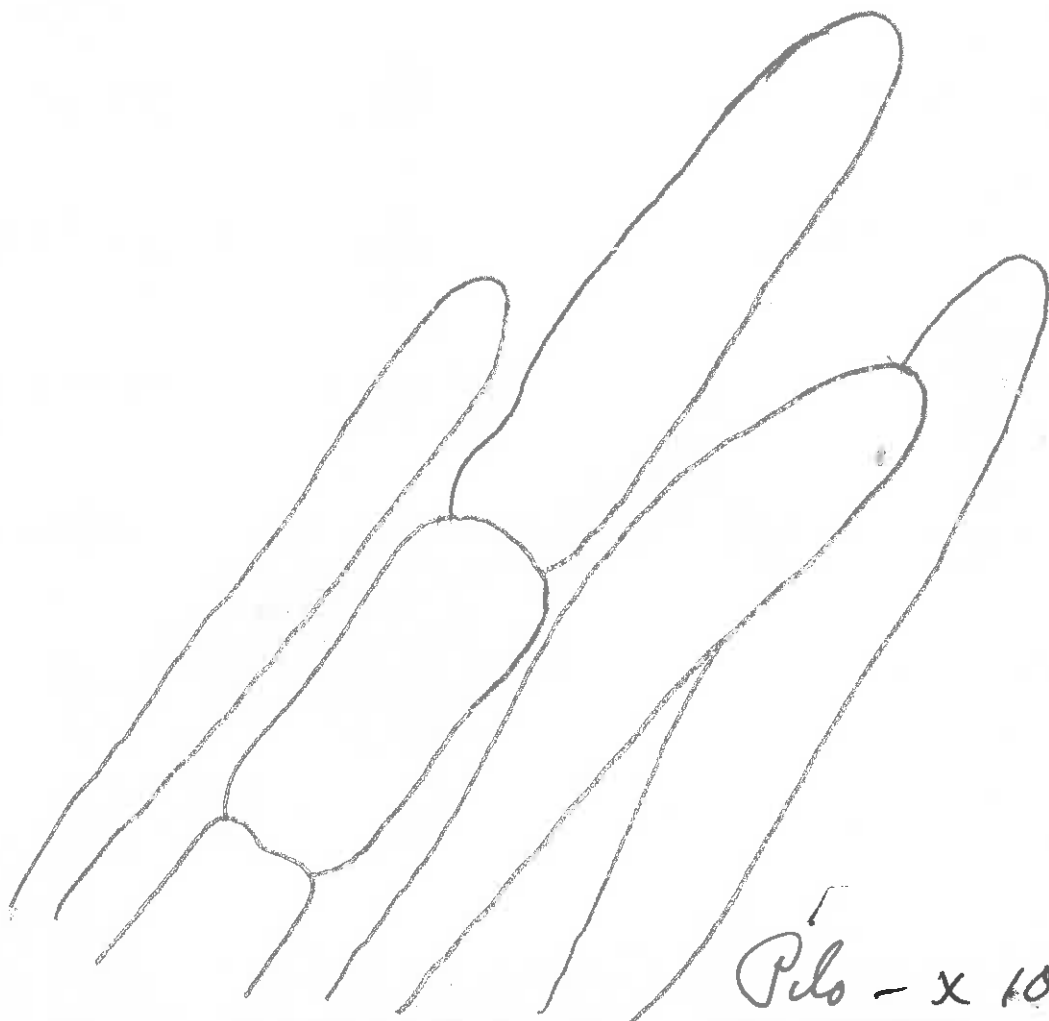
Ch

Nolanea dyptales (Pk.) Muir.

No. 23874 (from Bas, 1472, Leiden)



Ch - x 1000



Pilo - x 1000

27552 ENTOLOMA (NOLANEA) BABINGTONII (Blox.) Sacc.

In Acer duff, Highlands, N.C., Petersen, Aug. 20, 1961.

Spores 11-15 x 7.5-9 μ , long-ellipsoid, 8-10-sided, wavy-nodulose. Pleurocystidia none; cheilocystidia 44-60 x 9-12 μ , flask-shaped, with a neck. Gill trama subparallel. Pileus trama radial. Cuticle bearing bundles of brown, septate, at times incrusting hyphae (the scales). Clamps not seen.

The outside length is shorter than usual, but other characters indicate babingtonii. In E. fibrillosa, which it resembles, there are large pleurocystidia.

ENTOLOMA BICOLOR Murr.

N. A. Flora 10:119. 1917

Pileus reaching 5 cm, broad, umbonate, uniformly melleous-
oohroleucous, dry, glabrous, ^{but appressed radiately, silky,} margin short-striate. Context rather
^{odor and} thick and firm, white; taste farinaceous.

^{emarginate or} Lamellae ^{or close,} sinuate, white to pink, rather crowded, ^{to broad,} medium
broad, [^]triangular, edges wavy.

Stipe ^{9-13 long,} 8 cm, ^{22 thick,} 10-15 mm, white, with a satiny luster, ^{flexuous,}
glabrous, equal, ^{solid or base tapering, spongy to solid.}

Spores 9-10 (11) x 7-8 (9) μ , ovoid, subglobose, to short-
ellipsoid, 5-(6) sided. Pleurocystidia and cheilocystidia none.
Gill trama subparallel, hyphae 7-12 μ broad. Pileus trama radial.
Cuticle repent with scattered to numerous more or less uplifted
hyphae. Clamps few on the surface hyphae. Lactifers none.

Habit, habitat, and distribution - On soil, in maple woods,
New York, and New Jersey, July.

Material Studied - NEW YORK: Murrill 61, type, from Lake
Placid, Adirondack Mts., July 17-29, 1912; Tennessee: ~~Harvey~~ Sharp
19334 (Tenn).

Observations. - The description of microscopic characters
above is based on a study of the type.

19334

ENTOLOMA BICOLOR Murr.

PHOTO

Pileus 3-5 cm broad, conic-convex, obtusely umbonate, "cream buff" to "chamois," radiately silky, margin undulate. Context thick on disc and firm, thin on margin, white; odor and taste slightly farinaceous.

Lamellae emarginate, ventricose, broad, close, white then "light pinkish cinnamon," edges even.

Stipe 9-13 cm long, 18-22 mm thick, white, shining, flexuous, spongy, equal except tapering at base.

Spores 8-11 x 7-8 μ , 5-6-sided, apiculate, angles sharp.

E. variabile has quadrate (more or less) spores, 12-14 x 10-12 μ .



19334 - *Eutoloma bicolor* Murr.

Esilia hispora Kauff.

Michigan Acad. Arts, Sci. & Letters 5:128, 1925

(see my reprint)

ENTOLOMA BREVIPES MURR.

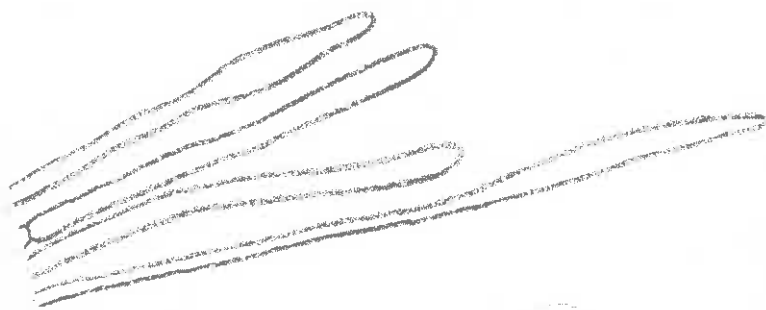
On soil, in woods clearing near N.Y. Botanical Garden,
leg. Murrill, Sept. 10, 1910.

TYPE ?

Spores 8.5-10 x 6-8 μ , 5-6-sided, Basidia 27-38
x 8-10 μ , 2-4-spored. Pleurocystidia and cheilocystidia
none. Gill trama subparallel, hyphae 4-7 μ broad. Pileus
trama radial. Cuticle repent, with numerous, colorless,
more or less uplifted hyphae, ~~4-7 μ broad~~. the terminal
elements as cylindric pilocystidia. Clamp connections
and lactifers none.

Eutoloma brevipes Murr.

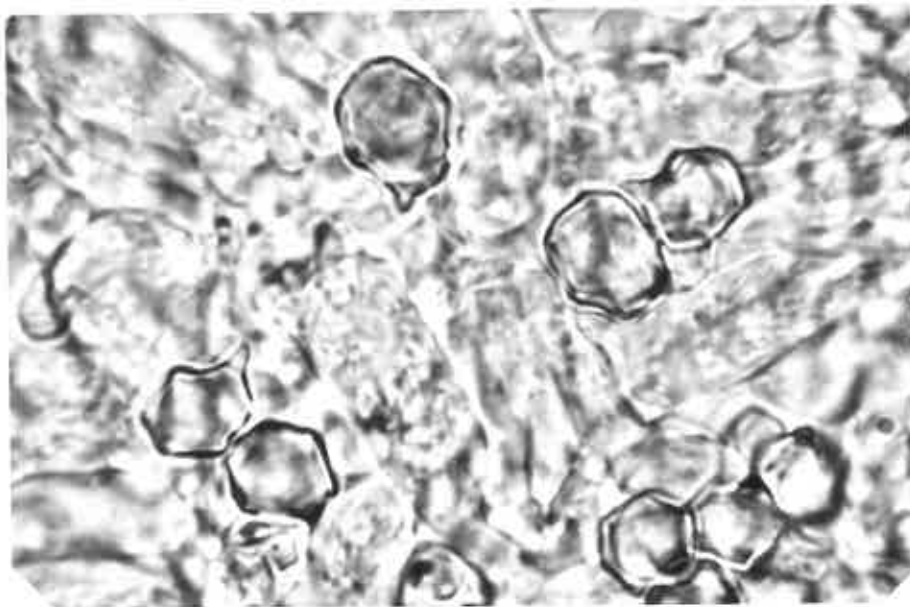
Type



Pilo. - x 1000

122

154



Entoloma brevipes Murr. - Type

X 2250

18608

ENTOLOMA BREVIPES Murr.

Pileus 4-5.5 cm., "cream buff" to "chamois", disk darker, rugose, wrinkles extend from disk to margin, dry, even. Context white, thin; odor and taste farinaceous.

Lamellae deeply emarginate, white, finally "pale pinkish cinnamon", broad, close or crowded.

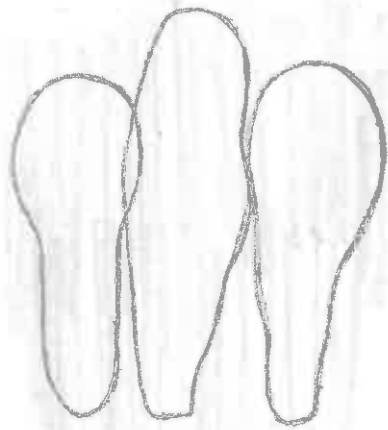
Stipe 3-5 cm. x 5-8 mm. (12 mm. when compressed), white, shining, hollow.

Spores 8-10 x 7-8 (8.5) μ , 5-6-sided. Basidia 32-40 x 8-10 μ , 2-4-spored. Pleurocystidia and cheilocystidia none. Gill trama subparallel, hyphae 5-8 μ broad. Pileus trama radial. Cuticle of repent hyphae. Clamps and lactifers none.

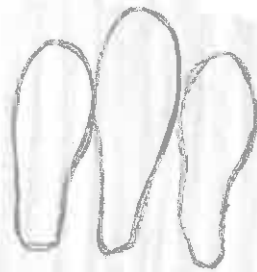
Subhymenium a narrow gelatinous zone.
colorless *not gelatinous.*

Eutoloma brevipes Murr.

Tenn - 18608



Ph. - x 1000



Oh. - x 1000

19357

ENTOLOMA BREVIPIES Murr.

PHOTO

Pileus 4-8 cm broad, convex, somewhat obtusely umbonate, hygrophanous, pellicle separable to disc, near "chamois" to "Isabella color," tinged greenish-olive, glabrous, appearing appressed-silky under lens, radiately rugulose, margin even. Context white, rather thin; odor and taste farinaceous.

Lamellae deeply emarginate, white, finally "light vinaceous cinnamon," close, medium broad, edge undulating.

Stipe 6-8 cm long, 8-10 mm thick, shining white, apex white floccose, dry, equal, spongy-solid.

Spores 9-11 x 7-8 μ , 5-6-sided, in deposit: "vinaceous cinnamon." Basidia 32-40 x 8-10 μ , 2-4-spored. Pleurocystidia and cheilocystidia none. Gill trama subparallel, hyphae 6-10 μ broad. ^{*Sutthymonium not distinctive.*} Pileus trama radial. Cuticle repent, the surface hyphae colorless. Clamp connections and lactifers none.



19357 - *Eutoloma* ^{*brevipes*} ~~*gracile*~~ PK.
(Notes under this number)

10767

NOLANEA BRUNNEA sp. nov.

Pileus 2-3 cm broad, convex-campanulate, umbonate, dry, brown, "Brussels brown" to "verona brown," disc darker (almost black), not hygrophanous, fibrillose-scaly, finally sub-rimose, margin even. Context whitish, thin (1 mm or less); odor and taste mild.

Lamellae narrowly adnexed, seceding at maturity, white at first, then flesh-pink, close, broadest behind (up to 3 mm), narrowed in front, edges eroded.

Stipe 9-10 cm long, 1.5-2 mm thick, tapering upward, pale brown, fibrillose-striate, slightly twisted, fistulose, dry, base white-mycelioid.

Spores 10-14 x 10-13 μ , quadrate. Basidia 40-46 x 11-15 μ , 2-4-spored, often bottle-shaped. Pleurocystidia and cheilocystidia none. Gill trama subparallel, hyphae 6-11 μ broad. Pileus trama radial. Cuticle repent with rather numerous, large (70-110 x 10-23 μ), fuscous, clavate pilocystidia. Clamp connections and lactifers none.

~~Septoria~~ No. 20505

~~Brunnea~~ sp. nov.

Rhodophyllus brunneus sp. nov.

Type



ch. x 1000

Pileus 10-18 mm broad, convex, subumbonate, hygrophanous, near "buffy brown" to smoky brown, disc darker, paler when dry (then darker when dried), silky, striatulate. Context dingy, thin; odor and taste farinaceous.

Lamellae adnexed, rather broad, close, pallid, then flesh color, edges even.

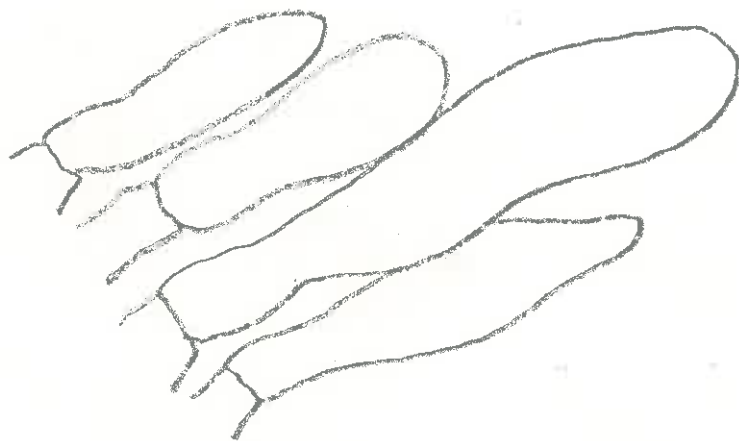
Stipe 2-4 cm long, 1-2 mm thick, concolorous to pileus, silky, equal.

Spores 10-12 x 7-8 μ , 5-6-sided, at times obscurely so, pale in 2% KOH, reddish-brown in Melzer's reagent. Pleurocystidia and cheilocystidia none. Gill trama parallel to subparallel, hyphae 10-20 μ broad. Pileus trama radial. Cuticle repent, the terminal elements more or less clavate, cystidioid. Clamp connections and lactifers none.

Near N. jamaicensis Murr., which is 4 cm broad, avellaneous, stipe 6 cm x 3 mm, avellaneous, lacks pilocystidia. In N. clandestina, the gills are fuscous brown, distant, cap depressed and low papilla, broadly adnate, N. papillata has a longer glabrous shining stipe.

Nolanea No. 9029
brunneipes

Type



Pilo - x 1000

12881

ENTOLOMA BRUNNEOCINEREA sp. nov.

TYPE

Pileus 1.5-2.5 cm broad, convex, expanding-convex, brownish with a gray tinge, glabrous or nearly so, margin even. Context white; odor and taste mild.

Lamellae emarginate, white then pinkish, moderately narrow, nearly close.

Stipe 2-4 cm long, 4-7 mm thick, dingy, glabrous, equal, base white-mycelioid.

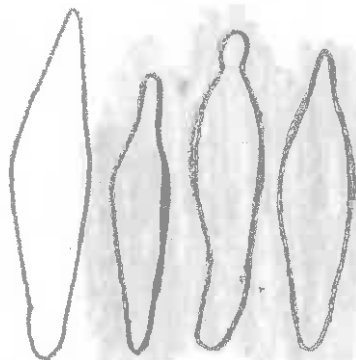
Spores 8-9.5 x 5.5-7.5 μ , ovoid to ellipsoid, 5-6-sided. Basidia 36-53 x 8-10 μ , 2-4-spored. Pleurocystidia none; cheilocystidia 35-46 x 7-10 μ , rare, inconspicuous, clavate to fusoid, apex acute, capitate, or appendiculate. Gill trama subparallel, hyphae 5-7 μ broad. Pileus trama radial. Cuticle repent, surface hyphae colorless, often more or less uplifted. Clamp connections rare on the epicuticular hyphae. Lactifers none.

Near strictius var. cystidiosa, but has smaller spores and shorter stipe. E. peckianum has larger spores.

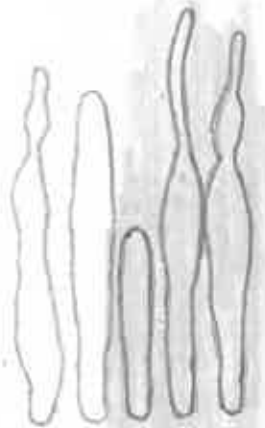
Eutoloma No. 12881

Brunneocinerea sp. nov.

Type



Ch - x 1000

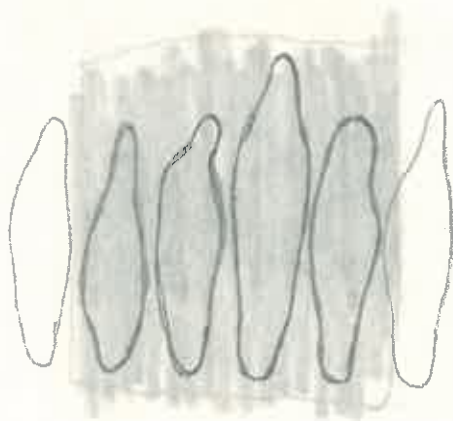


Caulo - x 1000

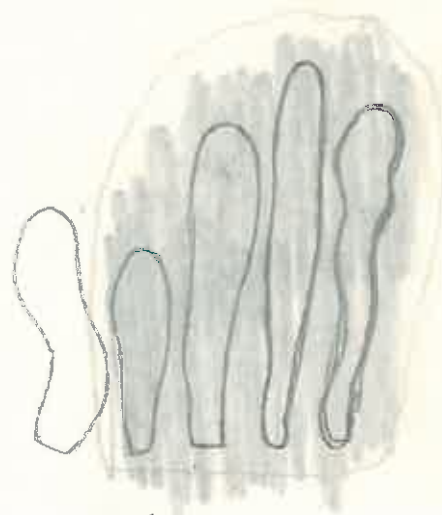
Leptonia brunneomarginata sp. nov.

24356

Type



Pl - x 1000



Ch - x 1000

ENTOLOMA BURLINGHAMIAE Murr.

North Amer. Flora 10:119. 1917

Pileus 4 cm, broad, campanulate to nearly plane, umbonate, flavous, umbo brownish-yellow, viscid, glabrous or minutely pruinose, entire.

Lamellae adnexed, white then salmon-colored, broad, crowded, several times inserted, edges entire.

Stipe 3 cm x 10-20 mm, white, cottony-fibrillose, slightly tapering upward, sometimes bulbous, solid or spongy.

Spores 7.5-9 x 6-7 μ , 5-sided. Basidia ^{35-46 x 9-12 μ , 2-4 spored} ~~unsuitable for~~
~~study~~). Pleurocystidia and cheilocystidia none. Gill trama subparallel, hyphae 3-6 μ broad. Pileus trama radial. Cuticle repent, surface hyphae narrow, appearing somewhat gelatinous, often uplifted, tending to form a turf, the terminal elements more or less slender-cystidioid. ^{connections} Clamp and lactifers none.

Habit, habitat, and distribution. - Among ferns, in hemlock woods, Vermont, July.

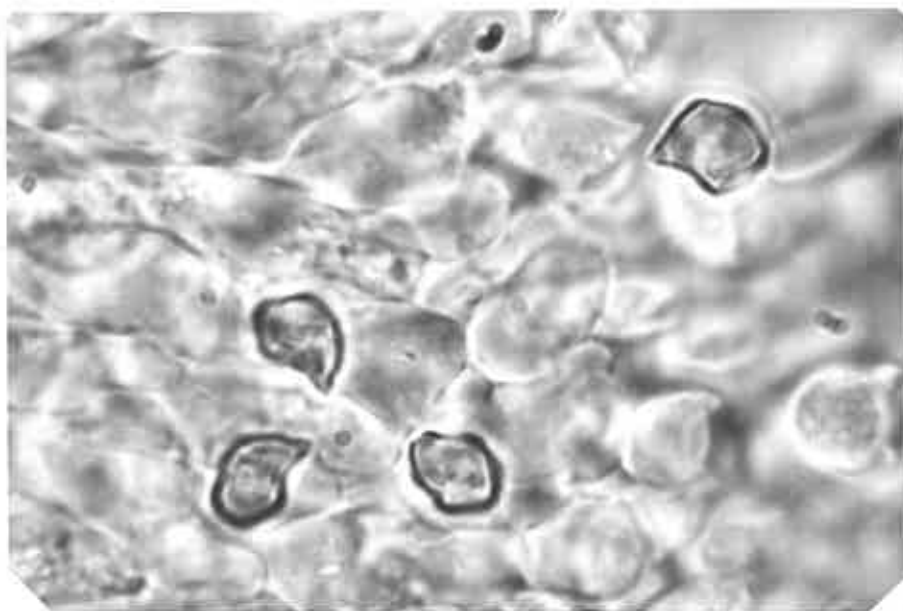
Material Studied. - VERMONT: Burlingham 41-1906, type, Newfane, July 16, 1906.

Entoloma burleighianae Murr.
Type



(123)

Pilo. - x 1000



Entoloma burlinghamiae Murr. - Type

x 1800

Claudopus byssisedus Gill, Champ. Fr., p. 427. 1876.

Pileus 2-3 cm broad, depressed behind (when eccentric), or depressed on disk (when centrally stipitate), grayish-white with a pinkish tint, white silky-fibrillose, rimose, very fragile, somewhat zonate, hygrophanous, margin even. Context thin, white; odor and taste ~~farinaceous~~ *mild or slight.**

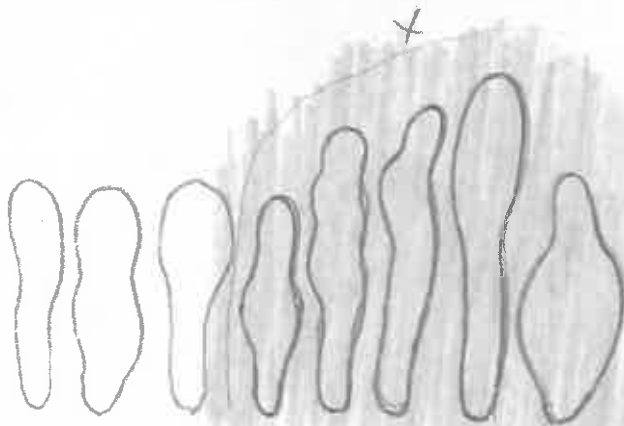
Lamellae short-decurrent, close, medium broad, many short, grayish then "mikado brown" when mature, none forked, edges fimbriate.

Stipe 9-12 mm x 1-2 mm, eccentric, central, or nearly lateral, grayish (concolorous) with white silky fibrils, dry, hollow, base mycelioid.

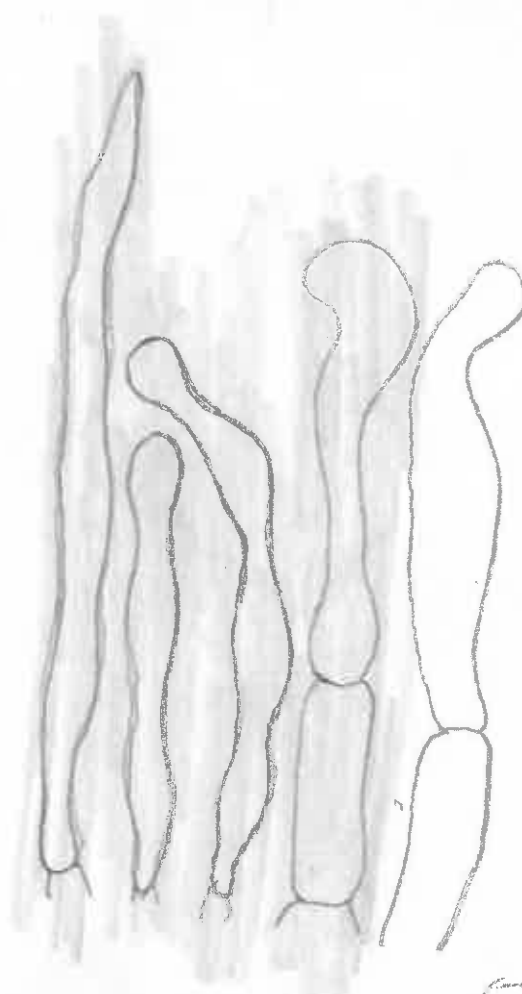
Spores 8-11 x 6-7.5 μ , 5-6-sided, often nodulose-angular, "vinaceous fawn" in deposits. Basidia 25-32 x 9-11 μ , 2-4-spored. Pleurocystidia none; cheilocystidia 27-45 x 7-11 μ , clavate, ventricose, or more or less constricted, scarce. Subhymenium a narrow zone of small, flattened cells. Gill trama subparallel. Pileus trama of radial hyphae. Cuticle of repent hyphae with semi-erect to erect, colorless, more or less constricted pilocystidia. Clamp connections and lactifers none.

* Moser says the odor and taste are farinaceous; others report none or mild.

Leptonia byssinoda (Fr.)
No. 20941



Ch - x 1000



Caulo - x 1000

filo-
colorless

Cuticle x 1000

(11)

24569

LEPTONIA BYSSISEDA (Fr.)

On bark, Cades Cove

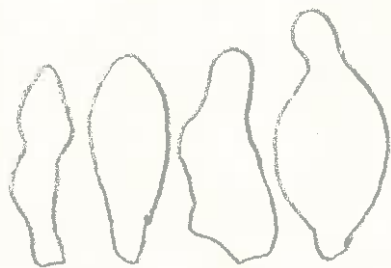
Aug. 29, 1961

Pileus 7-12 mm broad, concave, pinkish or avellaneous with white, silky fibrils, margin more or less incurved. Context thin; odor and taste mild. Lamellae adnate, seceding, radiating, subdistant, not broad, thick, blunt, forked, lamellulae numerous, avellaneous-pinkish.

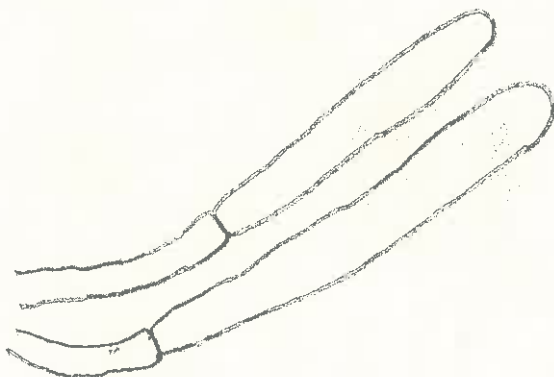
Stipe eccentric, dingy-pinkish, almost 2 mm x 1 mm, silky.

Spores 8-10(11) x 5.5-7(8) μ , 5-6-sided, at times somewhat angular-nodulose. Basidia 23-27 x 8-9 μ , 2-4-spored. Pleurocystidia none; cheilocystidia 26-32 x 6-15 μ , ventricose, or irregularly clavate, very rare. Gill trama subparallel, hyphae 6-10 μ broad. Pileus trama radial. Cuticle of brown repent hyphae, the ends often uplifted and more or less clavate,—as nearly colorless pilocystidia, 5-10 μ broad. Clamp connections none.

Leptonia byssinosa
No. 24569



Ch - x 1000



Pilo - x 1000

9278

LEPTONIA CAERULEA ~~O~~RUBESCENS sp. nov.

(Same as 17657)

Pileus 7-12 mm broad, convex-hemispheric, blue-black, depressed, disk fibrillose-scaly, margin at first even. Context pale bluish; odor and taste mild.

Lamellae adnexed, nearly subdistant, broad, at first glaucous-blue, finally flesh, edges concolorous.

Stipe 3-5 cm x 1.5-2 mm, steel-blue, equal, glabrous.

Spores 8-10 x 6-7.5 μ , 5-6-sided. Basidia 29-36 x 8-10 μ , 2-4-spored. Fleurocystidia and cheilocystidia none; pseudocystidia present. Trama of gills subparallel. Pileus and gill trama promptly "Spinel pink" in 2% KOH; lactifers in trama pink in KOH, and extended into hymenium as pseudocystidia.

Near caerulea Orton, which has cheilocystidia and gills yellow at first; chalybaea which has cheilocystidia; eucloroea has larger basidia (41-58 x 9-11 μ), and cheilocystidia; lazulina has larger spores and cheilocystidia; pyrospila pileus becomes sepia then buff on drying, and has cheilocystidia.

17657 LEPTONIA CAERULEO-RUBESCENS sp. nov.

Type

(Same as No. 9278)

Pileus 10-16 mm broad, convex, umbilicate, blue-black, disk fibrillose-scaly, margin even, becoming striate in age. Context thin, pale blue; odor and taste mild.

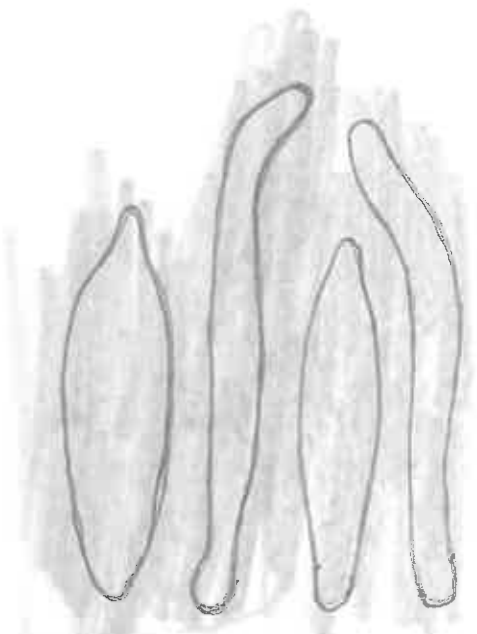
Lamellae rather broad, pale bluish then flesh color, edges concolorous.

Stipe 3-5 cm x 1-2.5 mm, blue-black, more or less equal.

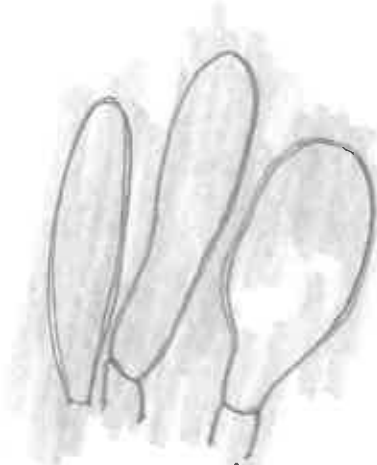
Spores 8-10 x 6.5-7.5 μ , 5-sided, symmetrical. Pleurocystidia and cheilocystidia none (lactifers, red or pink in 2% KOH, and extend from the trama into the hymenium as pseudocystidia. Cuticle repent, with tufts of pilocystidia which are brown.

Discussion - Near L. cyanula Fr. The pileus and gill-trama stain "spinel pink" in 2% KOH, but the basidia and spores are not stained. This color-change should be checked in European material of L. cyanula (if authentic material available). L. cyanula from Romagnesi does not show "spinel pink" trama in 2% KOH.

Leptonia 17657
~~Cyanula~~ Fr. sericea Lange
 caeruleo-imbescens sp. nov. - Type



Pl. - "Pseudocryptidia" - x 1000

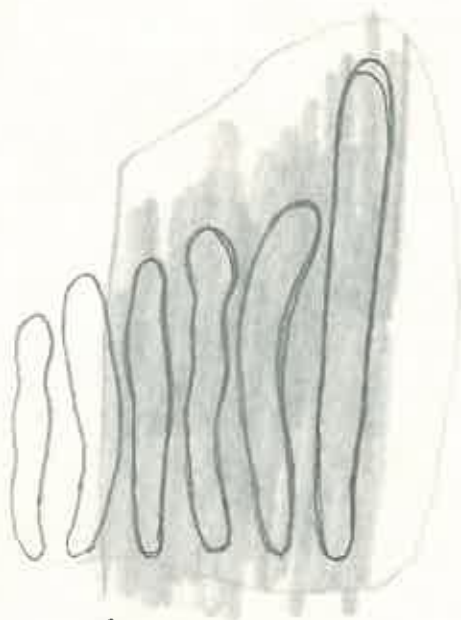


Cuticle ^{Pilo}
 ^ - x 1000

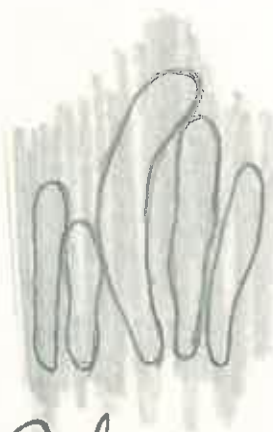
Peptonia No. 25750

Caeruleopallescens sp. nov.

Type



Ch - x 1000



Cauls - x 1000

LEPTONIA CAESIOCINCTA (Kühner) Orton
Trans. British Myc. Soc. 43:177. 1960/

Rhodophyllus caesiocinctus Kühner, Rev. Mycol., Paris, 19:4.
1954.

(Kühner's Latin Description - Translation)

Pileus 1.4-3.2 cm broad, convex, then expanded, umbilicate, more or less striate, murinous, at maturity more or less tinted ochraceous, in youth often with a pale caesius zone on the margin. Context thin; odor none.

Lamellae white, then rosaceous, edges crenulate, blackish to bluish, then black, diversely inserted.

Stipe 3.5-7.5 cm x 2-3.5 mm, equal, ochraceous then murinous, often pallid or becoming white, glabrous, except blackish-blue punctate above.

Spores 9-11.5 x 6.5-7.2 μ (in K. & R. spores given 7-8.2 μ broad). Granules abundant in carpophore hyphae. Clamp connections lacking.

LEPTONIA CAESIOCINCTA (Kühner) Orton

Trans. British Myc. Soc. 43:177. 1960/

Rhodophyllus caesiocinctus Kühner, Rev. Mycol., Paris, 1914.
1954.

(Kühner's Latin Description - Translation)

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Lamellae white, then rosaceous, edges crenulate, blackish to bluish, then black, diversely inserted.

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Spores 9-11.5 x 6.5-7.2 μ (in K. & R. spores given 7-8.2 μ broad). Granules abundant in carpophore hyphae. Clamp connections lacking.

LEPTONIA CAESIOCINCTA (Kuhn.) Orton

from Royal Bot. Garden, Edinburgh, coll. P. D. Orton, No. 1258, Membury, Devon., Nov. 1, 1957.

Spores 9-13 x 6-8.5 μ , 5-6-sided, at times obscurely 7-sided. Basidia 22-26 x 6-8 μ . Pleurocystidia none; cheilocystidia 36-52 x 8-13 μ , clavate, pale fuscous to medium fuscous. Gill trama subparallel, hyphae 3-6 μ broad. Pileus trama radial. Cuticle of repent, brown hyphae, the free ends often upturned, as clavate pilocystidia. Clamp connections none.

The gill edges, or some of them, blackish.

LEPTONIA CAESIOCINCTA (Kuhn.) Orton

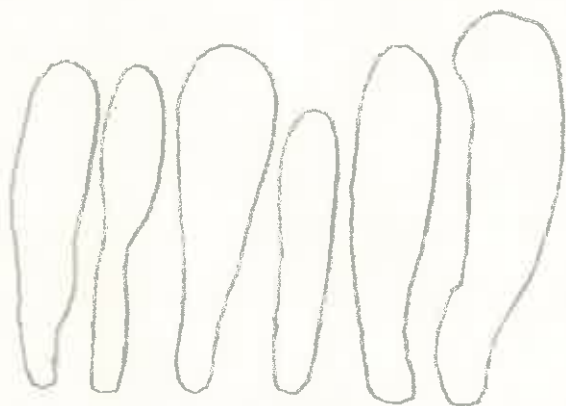
from Royal Bot. Garden, Edinburgh, coll. P. D. Orton, No. 1258,
Membury, Devon., Nov. 1, 1957.

Spores 9-13 x 6-8.5 μ , 5-6-sided, at times obscurely
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fuscous. Gill trama subparallel, hyphae 3-6 μ broad. Pileus
trama radial. Cuticle of repent, brown hyphae, the free ends
often upturned, as clavate pilocystidia. Clamp connections none.

The gill edges, or some of them, blackish.

Leptonia caesiocincta (Kuhn.) Orton

Orton No. 1258



Ch - x 1000

LEPTONIA CALIFORNICA (Murr.) comb. nov.

Eccilia californica Murr., North Amer. Flora 10:84. 1917.

Pileus 1.5-2.5 cm broad, convex-umbilicate, not expanding, uniformly grayish-brown, glabrous, dry, entire, inflexed. Context thin, grayish-brown; taste nutty.

Lamellae decurrent, white to salmon-colored, broad, crowded, edges concolorous.

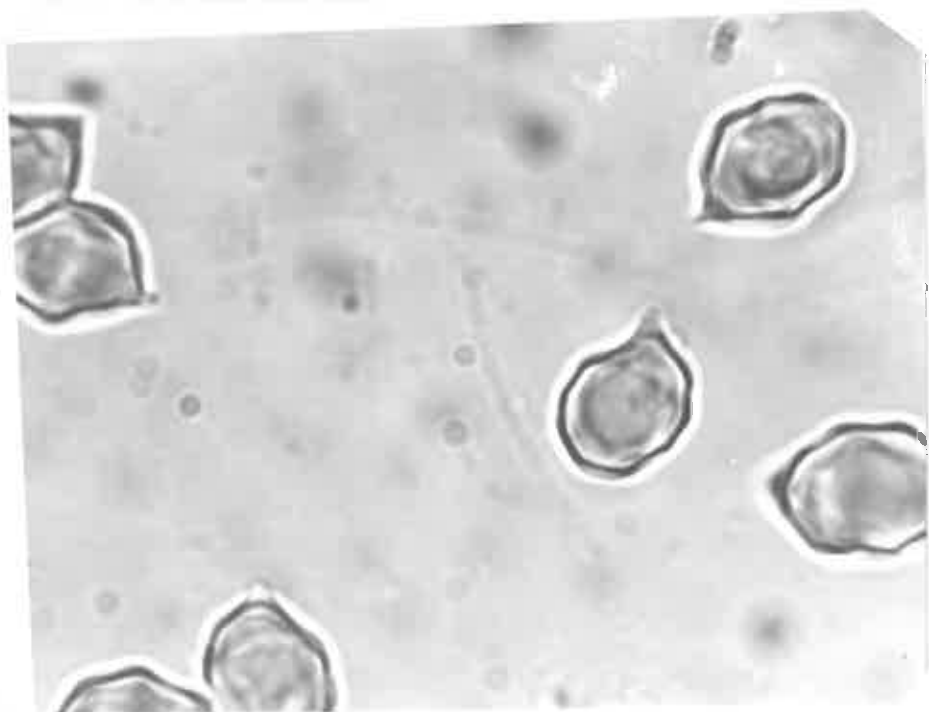
Stipe 1.5-3 cm x 1-2 mm, grayish-brown, glabrous, equal or slightly enlarged above, solid.

Spores 9-11 x 7-8 μ , 7-angled, often 8-9-angled, and angles often indistinct. Basidia 28-38 x 10-12 μ , 2-4-spored. Pleurocystidia and cheilocystidia none. Subhymenium not differentiated. Gill trama subparallel. Pileus trama radial (pseudoparenchymatous in tangential sections). Cuticle of repent hyphae. Clamp connections not found on the cuticular hyphae of either the pileus or stipe. Lactifers none. Hyphae of the pileus cuticle with granulations.

Habit, Habitat, and Distribution - On grassy soil, California, December.

Material Studied - CALIFORNIA: McMurphy, 53, the type, from Madera Creek, near Stanford University, Dec. 21, 1902.

Observations - The description of the microscopic characters is based on a study of the type. This is somewhat suggestive of L. alabamensis which has mostly 5-sided spores.



Eccilia californica Murr. - Type

LEPTONIA CANCRINA (Fr.)

(Bas-1024; Tenn.-26247)

Notes by Bas

Cap 5-15 mm, plano-convex, soon flat, with slightly depressed center, not hygrophanous, uniformly very pale-caffé-au-lait with faint pinkish tinge, unpolished, very minutely appressedly felted. Smell distinctly farinose.

Gills 15-20, 3-7 small gills, rather distant, subdecurrent, rather thick, white then pale pink.

Stipe up to 15 x 2 mm, terete, minutely white felted on glossy-whitish background.

Notes by Hesler

Spores 10-12 x 7.5-9 μ , 7-10-sided, nodulose. Basidia 33-38 x 10-12 μ , 4(2)-spored. Pleurocystidia and cheilocystidia none. Gill trama subparallel, hyphae 4-6 μ broad. Pileus trama radial. Cuticle of repent hyphae, bearing a turf of colorless hyphae, often in tufts (scales). Clamp connections none.

K & R give spores 11-15(16) x 7-9-11.5 μ .

Pileus 3-5.5 cm broad, convex, white, hygrophanous, somewhat shining, at times radiately rugose, margin even. Context white, firm, thick; odor mild, taste slight (like watermelon).

Lamellae emarginate, close, broad, white, finally "vinaceous cinnamon," edges fimbriate.

Stipe 7-10 cm long, 5-6 mm thick, white-shining, apex mealy, elsewhere glabrous, equal, somewhat twisted, cartilaginous, hollow.

Spores 8.5-11 x 7-8 μ , subglobose, ovoid, to ellipsoid, 5-6(-7)-sided, occasionally obscurely so, color in deposit: "mikado brown." Basidia 38-54 x 9-11 μ , 2-4-spored. Pleurocystidia 40-63 x 3.5-4 μ , cylindric, at times irregular, scattered, rare; cheilocystidia 40-52 x 3-5 μ , similar, more common than pleurocystidia. Gill trama subparallel, hyphae 7-12 μ broad. Pileus trama radial. Cuticle repent; no pilocystidia. Clamp connections none; lactifers present in pileus trama and gill trama.

Entoloma subsericellum Murr. (= Nolanea s.) is smaller, different color (dried)- it is pallid!, has no pleurocystidia nor cheilocystidia, has larger spores, and pilocystidia.

Nolanea earlei is cinereous and has no cystidia. E. albidum has no pleurocystidia, narrow gills. E. brevipes (which 22413 resembles dry) is avellaneous-isabelline, disc umbrinous, no pleurocystidia and no cheilocystidia. Ecc. rugosus (Malencon)

Romagn.: spores 11.5-14.5 x 7-9.5 μ , no pleurocystidia.

E. subalbidum has narrow gills, different pleurocystidia (broader and shorter), strong farinaceous odor and taste.

can dens
Eutoloma No. 22413



Pl - x 1000



Ch - x 1000

Pileus 2-5 cm broad, hemispheric-convex, not fully expanding, umbilicate, "drab," or "buffy brown," darker when young, with a silky sheen, fibrillose to scaly, umbilicus densely dark scaly, margin even when dry, striatulate when wet, even when dry. Context thin, pallid to concolor with surface of pileus; odor fragrant, suggesting ripe apples or honeysuckle, taste mild to sweetish or nutty at first, soon bitterish.

Lamellae adnate with a decurrent tooth, then adnexed, finally seceding, many short, close to subdistant, broadest behind, narrowed in front, at first pallid, then "light pinkish cinnamon," then "pinkish buff," finally "vinaceous buff," edges concolorous, fimbriate.

Stipe 3-7 cm x 2-4 mm, at times compressed, cartilaginous, "avellaneous", at times concolor to pileus, dry, apex scaly-punctate to mealy, base white-mycelioid, elsewhere silky or scattered-fibrillose, glabrescent, striate, equal, base at times slightly enlarged, solid then tubular, easily splitting longitudinally.

Spores 8-11 x 6-8 μ , 5-6-(7) sided, angular, sub-nodulose, apiculate, color in mass: "pale cinnamon pink." Basidia 30-35 x 8-9 μ , 4-spored. Pleurocystidia none; cheilocystidia clustered, clavate to obclavate, 30-55 (80) x 8-16 (28) μ . Gill trama sub-parallel, hyphae 5-9 μ broad. Cuticle of repent, brown hyphae, bearing scattered tufts of brown, clavate pilocystidia. Clamp connections none.



12821 - *Leptonia canescens* sp. nov.

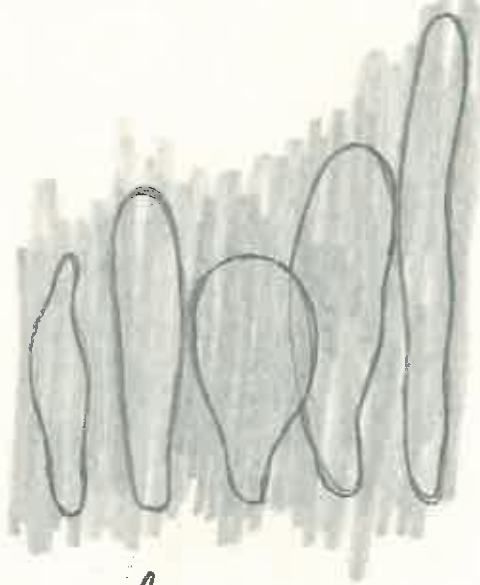
Pileus 1.5-3.5 cm broad, convex, almost expanding, disk depressed, "drab" to "hair brown," densely white-fibrillose-scaly over all, somewhat hygrophanous, margin even. Context dingy-brownish, rather thin; odor fragrant, taste pleasant.

Lamellae adnate with a decurrent tooth, white, then bright pink, finally "light pinkish cinnamon," nearly close, broad, ventricose, edges concolorous, denticulate to fimbriate.

Stipe 3-7 cm x 3-5 mm, dingy brownish, pruinose throughout, equal, base curved and white-mycelioid, stuffed then hollow.

Spores 9-11 x 6.5-8 μ , 5-sided, more rarely indistinctly 6-sided, symmetrical, "orange cinnamon," in mass. Basidia 33-40 x 8-10 μ , 4-spored. Pleurocystidia none; cheilocystidia clustered, unusually large and conspicuous, of 2 general types: cylindric to clavate, 65-80 x 6-12 μ , subglobose to pyriform, 34-60 x 10-28 μ . Gill trama subparallel. Pileus trama radial (pseudoparenchymatous in tangential section). Cuticle repent with numerous more or less clustered, colorless pilocystidia. Lactifers and clamp connections none.

Leptonia canescens sp nov
No. 21938



Ch - x 1000



Pilo - x 1000



21938 - *Leptonia canescens*

(try lighter print)

22585

LEPTONIA CANESCENS sp. nov.

Photo

(Cf. 24484 & 21938)

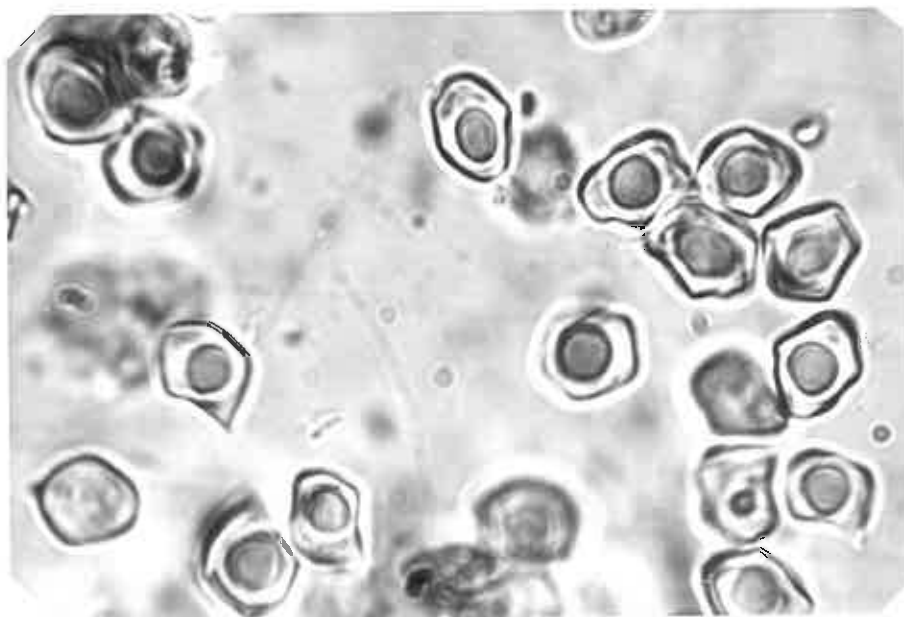
Type

Pileus 1-2 cm broad, convex, expanding convex, "buffy brown", densely covered with white fibrils, disk depressed, margin even. Context thin, pallid; odor mild or slight, taste sweetish, soon faintly like camphor and unpleasant.

Lamellae adnate-decurrent to adnexed, "pallid mouse gray", finally "vinaceous buff", broad, close, edges concolorous, fimbriate.

Stipe 3-4 cm x 2-3 mm, "buffy brown", apex paler, with numerous or scattered white, silky fibrils, glabrescent, cartilaginous, hollow.

Spores 8-11 x 6-8 μ , 5-sided (rarely 6-sided). Pleurocystidia none; cheilocystidia clavate to cylindrical, 40-76 x 6-12 μ . Gill trama parallel to subparallel. Pileus trama radial (as pseudoparenchyma in tangential sections). Lactifers present. Clamp connections absent. Cuticle appressed-fibrillose, a few more or less erect.



Leptonia No. 22585

canescens

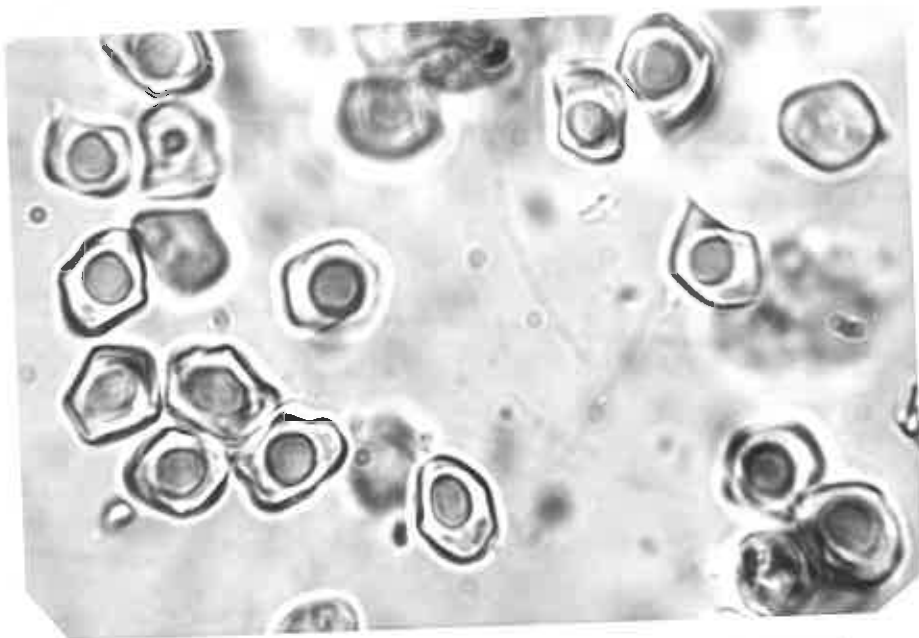
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22585

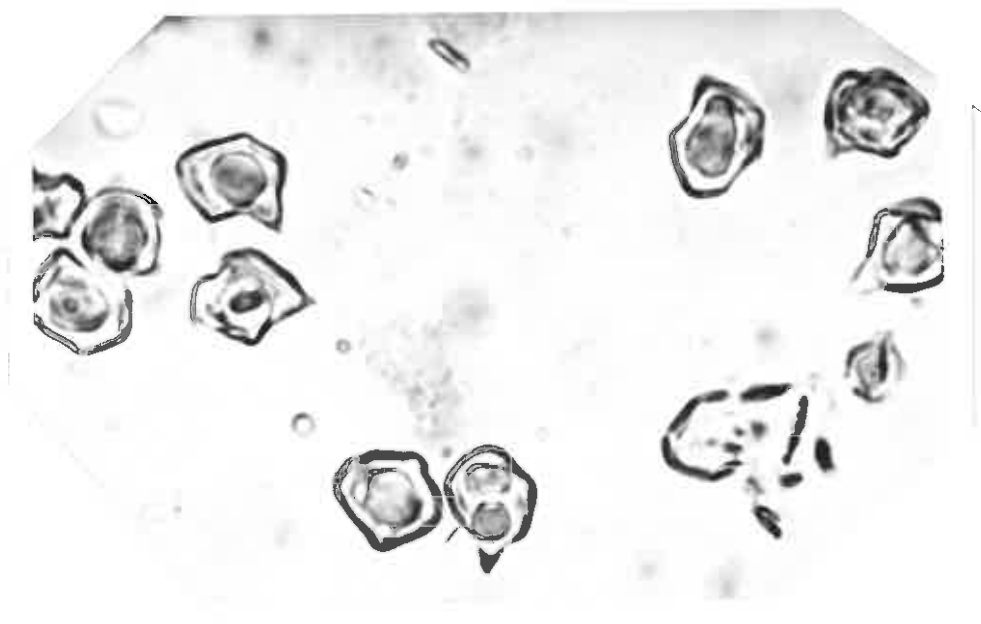


22585 - *Leptomyces canescens* sp. nov.

Jgbc



Leptonia No. 22585
canescens



Leptonia No. 22585

CAMELEONS

24484

LEPTONIA CANESCENS sp. nov.

cf. (22585)

Pileus 1.2-1.8 cm broad, convex, disk depressed and blackish, elsewhere pale brown, densely white-fibrillose-scaly over all, somewhat rimose, margin even. Context watery-brown, thin, brittle; odor fruity, taste sweetish.

Lamellae adnexed, "pale cinnamon pink", rather broad, close, many lamellulae, edges concolorous, fimbriate.

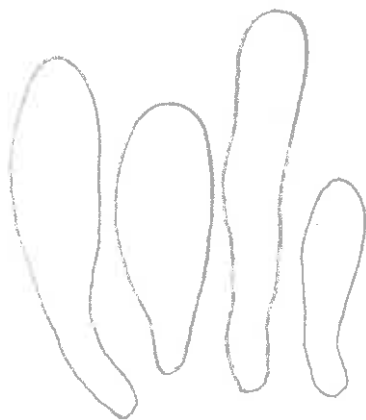
Stipe 3.5-5 cm x 2-3 mm, dingy gray-brown, white pruinose more or less over all, equal, hollow, cartilaginous.

Spores 8-10 x 6-8 μ , 5-sided, at times indistinctly 6-sided, symmetrical. Basidia 28-35 x 7-10 μ , 2-spored. Pleurocystidia none; cheilocystidia 26-60 x 7-12 μ , clavate or subcylindric, clustered. Subhymenium often not differentiated, at times a very narrow zone of flat cells. Gill trama of subparallel hyphae. Pileus trama of radial hyphae (seen as pseudoparenchyma in tangential section). Cuticle of repent brown hyphae, overlaid with colorless broad hyphae which are often more or less erect or semi-erect. Clamp connections and lactifers absent.

Habitat - On soil, in deciduous woods, Gatlinburg, Aug. 8, 1961.

Cf. 22585, which is the same as No. 24484.

Leptonia 24484
canescens sp. nov.



Ch - x 1000

25151

RHODOPHYLLUS CARNEO-ALBUS (With.) Qué1.

Above Patsch station, Tyrol, Austria, leg. and
det. Moser, August 20, 1950.

Spores 9-11 (12) x 7-8.5 μ , 5-sided. Basidia 26-32 x
9-10 μ , (2) 4-spored. Pleurocystidia and cheilocystidia none.
Gill trama subparallel, hyphae 4-8 μ broad. Subhymenium not
distinctive. Pileus trama radial. Cuticle repent, bearing
clavate, colorless pilocystidia. Caulocystidia none. Clamp
connections and lactifers not found.

Moser (Key, p. 121) distinguishes it from sericellus,
as follows:

Pileus innately fibrillose, with grayish, shiny spots,
convex-umbilicate, 1.5-2.5 (cm). Lamellae white when young,
distant. Stipe white, 4-5 cm x 2-3 mm, Spores 8-11 x 7-8 μ .
Lange 79B R. carneo-albus (With.) Qué1.

Pileus ivory-whitish, center somewhat yellowish, 0.7-1.5 cm,
convex, margin at length inrolled. Lamellae white, distant.
Stipe in age somewhat reddish, 2.5-4 cm x 1.5-2.5 mm. Spores
8-9 x 8 μ , 5-6-angled. Lange 77E....R. sericellus (Fr.) Qué1.

21855

NOLANEA CAROLINIANA sp. nov.

PHOTO

TYPE

Pileus 2-3.5 cm broad, convex, grayish brown, silky, margin striate. Context white, thin; odor and taste farinaceous.

Lamellae adnexed, white then bright pink, narrow, to medium broad, rather close.

Stipe 2.5-4.5 cm long, 3-5 mm thick, equal, dingy whitish, with sparsely scattered white fibrils.

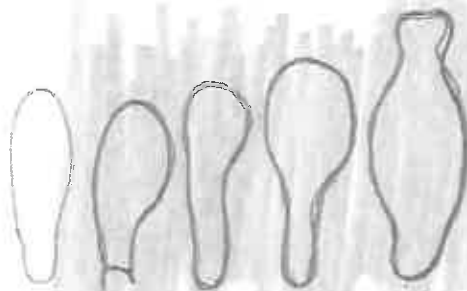
Spores 8.5-10.5 x 6-7.5 μ , ellipsoid to subovoid, 5-6-sided, in deposit: "orange cinnamon." Basidia 29-33 x 8-10 μ , 2-4-spored. Pleurocystidia and cheilocystidia none. Gill trama subparallel, hyphae 5-9 μ broad. Pileus trama radial. Cuticle repent; pilocystidia none. Clamp connections and lactifers none.



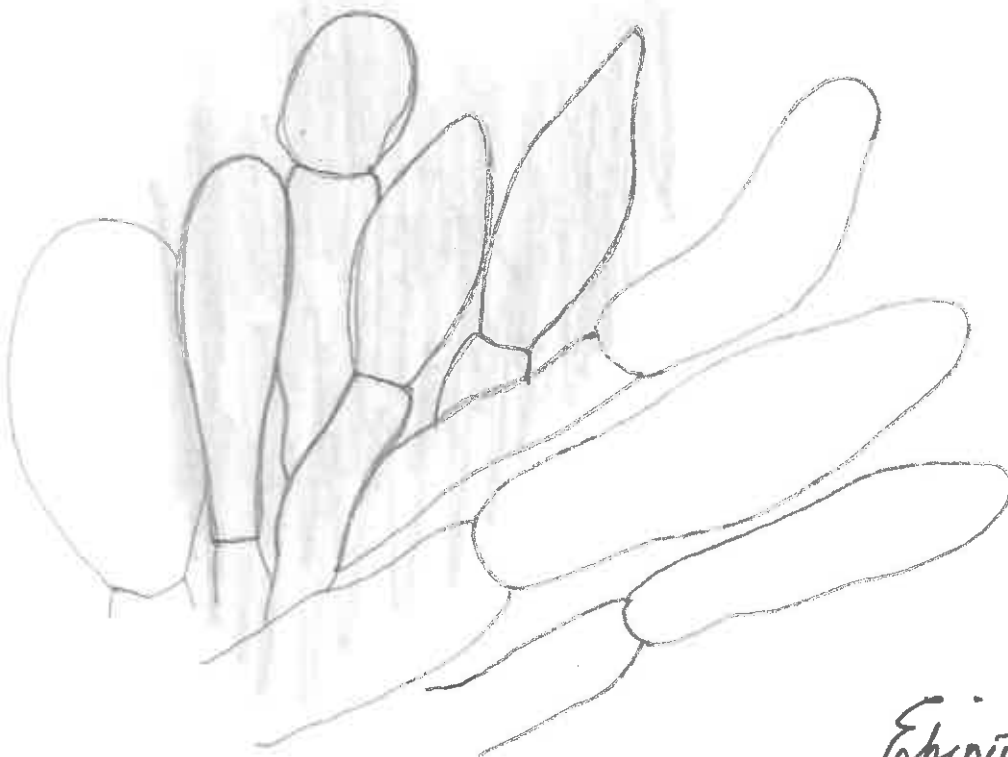
21855- *R. carolinianus*

Septonia 24410
carolinensis sp. nov.

Type



oh - x 1000



Epicuris - x 1000

LEPTONIA CEPHALOTRICHIA Orton

Trans. British Myc. Soc. 43(2) : 291. 1960

Eccilia molliusculus (Lasch) Qué1

Rhodophyllus molliusculus (Lasch) Romagn

Pileus 5-16 mm broad, convex then expanded-convex, often truncate-umbonate, sometimes also slightly umbilicate, white then sometimes with slight pinkish or dirty yellowish tinge in places, minutely white silky-floccose or floccose, scaly or silky shiny, margin delicately ciliate-fringed when fresh. Context very thin, white; odor mealy.

Lamellae adnate, often with a tooth or subdecurrent, white then pinkish, distant, edges even.

Stipe 10-35 x 0.5-1.3 mm, white, then whitish or slightly dirty yellowish or brownish, apex minutely pubescent-pruinose, elsewhere silky fibrillose.

Spores 9-11 x 6-7 μ , oblong-angular. Basidia 30-40 x 9-11 μ , 4-spored. Pl. and Ch. none. End cells of hyphae of pileus cuticle cylendric-capitate, 40-80 x 3-5 μ , at capitulum (5)7-10 μ , diam. Similar but longer cells on stipe apex, 35-160 x 2-5 μ , head (4)6-10 μ , diam.

HABIT, HABITAT, AND DISTRIBUTION : On soil, in shady woods, England, October.

MATERIAL STUDIED : NETHERLANDS : Bas 1540 (Tenn-26251).

OBSERVATIONS : The description of the species given above is from Orton. He says this is Eccilia molliuscula (Lasch) Quélet. and Rhodophyllus molliuscula (Lasch) Romagn. He thinks Quélet's ~~binomial~~^{was} founded on an error, hence describes it as a new species. Finally, Orton thinks L. sericella a more robust species and lacking the peculiar capitate cells, is different.

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Lamellae adnate, often with a tooth or subdecurrent, white then pinkish distant, edges even.

Stipe 10-35 x 0.5-1.3 mm, white, then whitish or slightly dirty yellowish or brownish, apex minutely pubescent-pruinose, elsewhere silky fibrillose.

Spores 9-11 x 6-7 μ , oblong-angular. Basidia 30-40 x 9-11 μ , 4-spored. Pl. and Ch. none. End cells of hyphae of pileus cuticle cylendric-capitate, 40-80 x 3-5 μ , at capitulum (5)7-10 μ , diam. Similar but longer cells on stipe apex, 35-160 x 2-5 μ , head (4)6-10 μ , diam.

HABIT, HABITAT, AND DISTRIBUTION : On soil, in shady woods, England, October.

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NOLANEA CETRATA

Ex-Herb. Kew. In moss, under pines, Leighton Buzzard Beds.
Leg. D. A. Reid, Nov. 2, 1952.

Spores 9-12 x 7-8 μ , (5)6-(7)-sided, wavy-nodulose, ellipsoid.
Basidia 27-35 x 8-10 μ , 2-spored; a few 40-48 x 9-11 μ , 1-spored.
Gill trama slightly interwoven, hyphae 3-6 μ broad. Subhymenium
not distinctive. Pileus trama radial. Cuticle of colorless,
repent hyphae. Clamps none.

NOLANEA CETHATA

Ex-Herb. Kew. In moss, under pines, Leighton Buzzard Beds.
Leg. D. A. Reid, Nov. 2, 1952.

Spores 9-12 x 7-8 μ , (5)6-(7)-sided, wavy-nodulose, ellipsoid.
Basidia 27-35 x 8-10 μ , 2-spored; a few 40-48 x 9-11 μ , 1-spored.
Gill trama slightly interwoven, hyphae 3-6 μ broad. Subhymenium
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